Environment Canada / Environnement Canada

Canadian Forestry Service / Service canadien des forêts

A List of Seed in the Canadian Forestry Service Seed Bank

Liste des semences de la banque de semences du service canadien des forêts

P.S. Janas

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Petawawa National Forestry Institute

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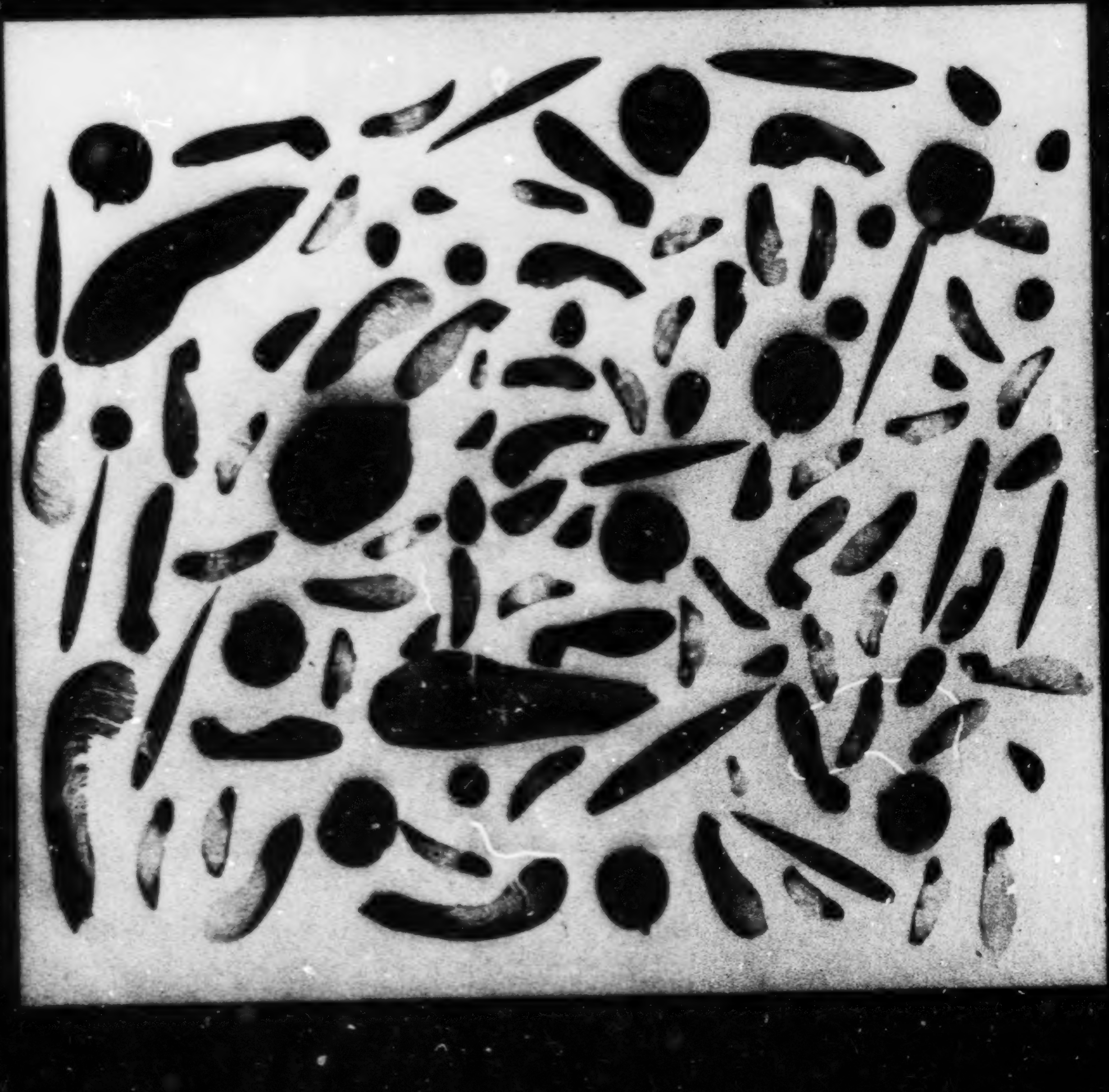

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INSTITUT FORESTIER NATIONAL DE PETAWAWA

L'Institut forestier national de Petawawa (IFNP) a été créé le 1[er] avril 1979, suite au fusionnement de la Station expérimentale forestière de Petawawa et de deux Instituts établis à Ottawa: celui de l'aménagement forestier et celui de la recherche sur les feux de forêt. En 1980, est venue s'y adjoindre la Direction de la statistique forestière et des systèmes.

Son mandat, comme celui des autres établissements du Service canadien des forêts, est de promouvoir une meilleure gestion et une utilisation plus rationnelle des ressources forestières du Canada, pour le bien économique et social de tous les Canadiens. En tant qu'Institut national, il doit s'attacher à des problèmes qui débordent le cadre régional ou qui nécessitent des compétences particulières de même qu'un équipement coûteux, non disponible aux installations régionales du Service canadien des forêts. La plupart du temps, ses recherches sont effectuées en étroite collaboration avec le personnel des centres régionaux ou des services forestiers des provinces.

L'Institut mène en parallèle deux grands programmes de recherche:

RECHERCHES SUR LES FEUX ET EN TÉLÉDÉTECTION. D'immenses étendues de terres forestières productives sont ravagées chaque année au Canada par les feux de forêt. Les recherches portent sur le comportement des feux de forêt, sur de nouvelles méthodes pour les combattre. Elles s'attardent aussi à l'évaluation de matériel d'extinction et de retardateurs. Elles s'intéressent encore au développement de systèmes informatisés de défense contre les incendies, systèmes que ne tardent pas à utiliser les organismes qui, à travers le pays, luttent contre les feux. Quel est l'impact des feux de forêt sur l'environnement et l'économie et comment, en sylviculture, tirer parti du feu pour un aménagement intensif des forêts, demeurent aussi la préoccupation des chercheurs.

En télédétection, la recherche veut exploiter les récentes techniques aéroportées et spatiales. À cet égard, ARIES, le système de traitement des images numériques s'avère des plus intéressants.

AMÉNAGEMENT INTENSIF DES FORÊTS. Alors que le Canada accentue ses efforts d'aménagement forestier pour répondre à une hausse prévue de la demande de bois, le rôle de ce programme d'aménagement à l'Institut prendra de plus en plus d'importance. Nul doute qu'un vaste programme de régénération intensive va nécessiter un approvisionnement sûr en semences de haute qualité des espèces voulues. En vue de constituer un meilleur stock de matériel sur pied, des recherches pour l'amélioration génétique des arbres forestiers sont grandement souhaitables. Si l'utilisation accrue de toute la partie aérienne de l'arbre (la biomasse) reste un objectif à atteindre, il faudra cependant étudier avec soin son incidence sur l'environnement; et l'on devra faire de même pour toute autre forme d'aménagement intensif. Des méthodes bio-technologiques permettant d'accroître le rendement tout en maintenant la productivité sont aussi à l'étude.

Pour mener à bien ses programmes de recherche, l'Institut dispose d'une superficie forestière de 98 km^2 dans la partie ouest de la réserve militaire de Petawawa. Il conserve, depuis les années 20, les registres des expériences et depuis cette même époque ne cesse d'aménager des placettes d'échantillonnage. La forêt sert également de laboratoire pour les écoles de la région. De plus, un centre d'accueil reçoit des visiteurs tout au long de l'été.

La Direction de la statistique forestière et des systèmes (DSFS), établie à l'Institut, est chargée de recueillir et de publier les données sur les ressources forestières du Canada. L'entremise du comité de l'inventaire des forêts, formé de responsables du fédéral et des provinces, facilite grandement ses rapports avec les organismes forestiers provinciaux pour améliorer et uniformiser les données sur ces ressources.

Par l'intermédiaire du programme FORSTATS, qui implique tous les centres régionaux du Service canadien des forêts, la DSFS coordonne, au sein de ce Service, la cueillette et la publication de statistiques nationales sur les forêts du Canada.

À tous les cinq ans, elle publie un inventaire des forêts du Canada. Ce rapport officiel renseigne sur les lieu, superficie, espèces et état de nos forêts. Ses nombreux contacts avec les provinces visent aussi à réunir le plus de données possibles sur les perturbations survenues en forêt: feux, récoltes, insectes, maladies, et opérations d'aménagement. Ces données sont essentielles pour planifier des stratégies à même de favoriser l'aménagement de cette ressource naturelle renouvelable et combien importante.

LIST OF SEED IN THE CANADIAN FORESTRY SERVICE SEED BANK

LISTE DES SEMENCES DE LA BANQUE DE SEMENCES DU SERVICE CANADIEN DES FORÊTS

P.S. Janas

Information Report

Rapport d'information

PI-X-39 (E/F)
1984

Petawawa National Forestry Institute
Canadian Forestry Service
Environment Canada

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A LIST OF SEED IN THE CANADIAN FORESTRY SERVICE SEED BANK

Abstract
Information is given on the native and exotic forest tree and shrub seed available for research purposes from the Canadian Forestry Service Seed Bank at the Petawawa National Forestry Institute. It supersedes Information Report PS-X-13. Reference is made to the procurement of seed and to the maintenance of seed quality.

Introduction

Forest research is long term and often costly. It is, therefore, important that only seed of known origin and quality be used for species trials, tree breeding, genetics studies, and other silvicultural experiments. To this end, the National Tree Seed Centre at the Petawawa National Forestry Institute holds seed in cold storage at the seed bank, and procures from other establishments seed of a wide range of species and geographic origins. Information on indigenous and exotic forest tree and shrub seed available to researchers from the seed bank is provided in this report.

Seed procurement

The seedlots described in the attached list have been procured in several ways. Some collections were made by staff at PNFI and others by cooperators in Canadian Forestry Service regional research centres, provincial forest services, forest industries, and other federal agencies. Several were

LISTE DES SEMENCES DE LA BANQUE DE SEMENCES DU SERVICE CANADIEN DES FORÊTS

Résumé
Ce rapport fournit des renseignements sur les semences d'arbres et arbustes, indigènes ou exotiques, que l'on peut se procurer pour fins de recherche à la banque de semences du Service canadien des forêts, à l'Institut forestier national de Petawawa; il remplace le rapport d'information PS-X-13. Il indique aussi la façon de se les procurer et de maintenir leur qualité.

Introduction

Comme la recherche forestière est une activité de longue haleine et souvent coûteuse, il est important que seules les semences d'origine et de qualité connues servent aux essais sur les espèces, à l'amélioration génétique des arbres, et aux autres expériences de nature sylvicole. Pour ce faire, le Centre national de semences forestières de l'IFNP qui obtient de différents organismes des graines d'essences très variées et de pays très divers veille à les garder dans des chambres frigorifiques. Ces semences d'arbres et arbustes forestiers indigènes et exotiques, le présent rapport montre comment les chercheurs, par l'intermédiaire de la banque de semences, peuvent se les procurer.

Obtention des semences

Les lots de semences décrits dans la liste ci-jointe ont été obtenus de plusieurs façons. Quelques-uns ont été fournis par l'IFNP, d'autres par des collaborateurs des centres de recherche régionaux du Service canadien des forêts, certains par les services forestiers provinciaux, les industries forestières

procured through exchange with foreign agencies or purchased from seed dealers in Canada and abroad.

The control of seed origin is maintained by collecting seed from natural stands at identified locations only or from planted trees of known origin. The seed bank now includes seed from trees that have been intensively selected over several generations for superior growth rate and form (e.g., Larix spp.). The control and identification of seed origin have been described by Wang (1973).

Unless otherwise requested, all seed is collected in fair to good crop years to ensure high quality and an appropriate genetic sample of the population.

et des organismes fédéraux. Des lots proviennent d'échanges avec des organismes étrangers ou furent achetés de commerçants au Canada ou à l'extérieur.

Le contrôle de l'origine des semences est assuré en récoltant les semences uniquement dans des peuplements naturels dont la localisation est connue ou sur des arbres plantés d'origine aussi connue. La banque de gènes contient actuellement des semences d'arbres qui ont fait l'objet d'une sélection intensive pendant plusieurs générations dans le but d'en améliorer la croissance et la forme (ex. Larix spp.). Les méthodes de surveillance et d'identification de l'origine des semences ont été décrites par Wang (1973).

Sauf avis contraire, toutes les semences sont récoltées au cours d'années où la production est de moyenne à bonne, afin d'assurer la qualité et obtenir un échantillon représentatif de l'ensemble des gènes de la population.

Seed quality

Proper control of seed quality will minimize confounding influences and increase confidence in research results. Control of seed quality at the National Tree Seed Centre starts at the time of collection and is continuous through handling and storage of cones and fruit, processing, testing, and storage of seed (Wang 1973). Seedlots in the seed bank are suitable for provenance research, for example, and in many cases were collected in collaboration with geneticists in the Canadian Forestry Service.

Qualité des semences

Le contrôle de la qualité des semences permet de réduire au minimum les sources d'erreurs et d'augmenter d'autant la fiabilité des résultats de recherches. Au Centre national des semences forestières, ce contrôle s'exerce dès la récolte et se poursuit tout au long du processus de manutention, de traitement et d'entreposage des cônes, des semences ou des fruits (Wang 1973). Les lots de semences de la banque constituent entre autres, un matériel biologique de choix pour la recherche sur les provenances et dans plusieurs cas, ils ont été préparés en collaboration avec des généticiens du Service canadien des forêts.

Using the seed list

Species included in the seed bank list and the corresponding number of seedlots for each are provided in the "Species listing" section.

Of the species represented in the bank, only those whose seed has demonstrated the ability to retain viability over a number of years of storage in the facilities available are listed. Seed of those species that are difficult to store (e.g., *Acer saccharinum*, *Fagus grandifolia*, *Juglans nigra*, *Populus deltoides*, and *Quercus* spp.) can be provided by special collection upon request. The list is arranged in alphabetical order by genus, species, and variety. Nomenclature is based on *Native Trees of Canada* (Hosie 1979) for native species, and as far as possible, the *Manual of cultivated trees and shrubs hardy in North America* (Rehder 1940) for exotic species.

To assist in the selection of seedlots, information on year of collection, location (or a brief description of source in the case of plantation or seed orchard stock), collection type (see legend for details), latitude, longitude, and elevation is given in the list. Information on 1000-seed weight and germination is presented when available.

Persons requesting seed for research purposes should specify species, seed bank number, and amount of seed required. Amount required in grams can be obtained using the formula:

$$q = \frac{(1000 \text{ seed weight})\ (\#\ \text{seedlings})}{10\ (\%\ \text{germination})}$$

where q is amount of seed in grams.

Alternative selections should be provided in the event that some seedlots are no longer available.

Utilisation de la liste de semences

Les essences dont les semences sont en banque apparaissent dans la section "Liste des essences," avec chacune leur numéro correspondant.

Seules les espèces dont les semences ont démontré qu'elles pouvaient survivre un certain nombre d'années en entreposage, figurent sur la liste. Dans le cas d'espèces dont les semences sont difficiles à entreposer (ex. *Acer saccharinum*, *Fagus grandifolia*, *Juglans nigra*, *Populus deltoides* and *Quercus* spp.) une récolte spéciale pourra être faite sur demande. Les semences sont d'abord classées par ordre alphabétique selon le genre, l'espèce et la variété. La nomenclature adoptée est celle de *Native Trees of Canada* (Hosie 1979) en ce qui concerne les espèces indigènes et, dans la mesure du possible, celle du *Manual of cultivated trees and shrubs hardy in North America* (Rehder 1940) pour les espèces exotiques.

Afin de faciliter le choix des lots de semences, la liste indique l'année et le lieu de la récolte (ou une brève description de l'origine des graines si elles proviennent d'une plantation ou d'un verger à graines), le type de récolte (voir la légende de la liste de semences) ainsi que sa latitude, sa longitude et son altitude. Lorsque c'est possible, le poids de 1000 graines et le taux de germination y sont indiqués.

Ceux qui demandent des semences pour la recherche doivent préciser l'essence avec son numéro en banque et la quantité. On peut calculer la quantité nécessaire en grammes à l'aide de la formule suivante:

$$q = \frac{(\text{masse de } 1000 \text{ semences})\ (\#\ \text{semis})}{10\ (\%\ \text{germination})}$$

où q représente la quantité de semences en grammes.

On devrait spécifier d'autres choix au cas où certains lots seraient épuisés.

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SPECIES LIST/LISTE DES ESSENCES

SPECIES/ESSENCES	NUMBER OF SEEDLOTS PER SPECIES / NOMBRE DE LOTS DE SEMENCES PAR ESSENCE
ABIES ALBA (European silver fir)	2
ABIES BALSAMEA (balsam fir)	29
ABIES BALSAMEA var. PHANEROLEPIS	1
ABIES FIRMA (Japanese fir)	1
ABIES GRANDIS (grand fir)	1
ABIES LASIOCARPA (alpine fir)	5
ABIES NORDMANNIANA (Nordmann fir)	1
ACER JAPONICUM (Japanese maple)	1
ACER NEGUNDO (Manitoba maple; box-elder)	2
ACER PLATANOIDES (Norway maple)	9
ACER PSEUDOPLATANUS (sycamore maple)	2
ACER RUBRUM [red (soft) maple]	71
ACER SACCHARUM [sugar (hard) maple]	8
AESCULUS HIPPOCASTANUM (common horsechestnut)	1
ALNUS CRISPA (green alder)	13
ALNUS GLUTINOSA (black alder)	7
ALNUS INCANA [grey (European) alder]	5
ALNUS JAPONICA	1
ALNUS RUBRA [red (Oregon) alder]	27
ALNUS RUGOSA (speckled alder)	34
ALNUS SINUATA (sitka alder)	149
ALNUS TENUIFOLIA (mountain alder)	60
BETULA ALLEGHANIENSIS (yellow birch)	45
BETULA OCCIDENTALIS [water (black) birch]	1
BETULA PAPYRIFERA [white (paper) birch]	39
BETULA PENDULA [silver (weeping) birch]	4
BETULA POPULIFOLIA (grey birch)	1
BETULA PUBESCENS (downy birch)	1
BETULA VERRUCOSA (European white birch)	2
CARYA CORDIFORMIS (bitternut hickory)	1
CARYA GLABRA (pignut hickory)	1
CARYA LACINIOSA (big shellbark hickory)	1
CARYA OVATA (shagbark hickory)	1
CATALPA SPECIOSA (catalpa)	1
CHAMAECYPARIS LAWSONIANA (Port-Orford-cedar)	1
FRAXINUS AMERICANA (white ash)	81
FRAXINUS PENNSYLVANICA (red ash)	92
GLEDITSIA TRIACANTHOS (honey-locust)	1
KOELREUTERIA PANICULATA (golden rain tree)	1
LARIX DECIDUA (European larch)	14
LARIX DECIDUA var. POLONICA	1
LARIX EUROLEPIS (Dunkeld larch)	5
LARIX GMELINI (Dahurian larch)	4
LARIX GMELINI var. JAPONICA	1
LARIX GMELINI var. OLGENSIS	2
LARIX GMELINI var. PRINCIPIS	2
LARIX LARICINA (tamarack; eastern larch)	43

SPECIES LIST/LISTE DES ESSENCES

SPECIES/ESSENCES	NUMBER OF SEEDLOTS PER SPECIES	NOMBRE DE LOTS DE SEMENCES PAR ESSENCE
LARIX LEPTOLEPIS (Japanese larch)	53	
LARIX OCCIDENTALIS (western larch)	1	
LARIX POTANINII (Tibetan larch)	2	
LARIX SIBIRICA (Siberian larch)	10	
METASEQUOIA GLYPTOSTROBOIDES (dawn redwood)	1	
PICEA ABIES (Norway spruce)	21	
PICEA ASPERATA (dragon spruce! Chinese spruce)	1	
PICEA BICOLOR	1	
PICEA BRACHYTYLA var. COMPLANTA	1	
PICEA ENGELMANNII (Engelmann spruce)	5	
PICEA GLAUCA (white spruce)	628	
PICEA GLEHNII (Sakhalin spruce)	1	
PICEA KOYAMAE (Koyama spruce)	1	
PICEA LIKIANGENSIS (Likiang spruce)	1	
PICEA MARIANA (black spruce)	34	
PICEA MEYERI	1	
PICEA OBOVATA (Siberian spruce)	1	
PICEA OMORIKA (Serbian spruce)	1	
PICEA ORIENTALIS (oriental spruce)	1	
PICEA PUNGENS var. GLAUCA (Colorado blue spruce)	4	
PICEA PURPUREA	1	
PICEA RUBENS (red spruce)	20	
PICEA SCHRENKIANA (Schrenk's spruce)	1	
PICEA SITCHENSIS (sitka spruce)	26	
PICEA WILSONII	1	
PINUS BANKSIANA (Jack pine)	84	
PINUS CARIBAEA VAR CARIBAEA	1	
PINUS CONTORTA var. CONTORTA (shore pine)	3	
PINUS CONTORTA var. LATIFOLIA (lodgepole pine)	83	
PINUS CONTORTA var. MURRAYANA	1	
PINUS DENSIFLORA (Japanese red pine)	1	
PINUS ELLIOTTI (slash pine)	1	
PINUS FLEXILIS [limber (Rocky Mountain white) pine]	1	
PINUS HALEPENSIS (Aleppo pine)	1	
PINUS KORAIENSIS (Korean pine)	3	
PINUS MONTICOLA [western white (silver) pine]	23	
PINUS NIGRA (Austrian pine)	2	
PINUS NIGRA var. BANATICA	1	
PINUS NIGRA var. KOEKELARE	1	
PINUS OOCARPA	2	
PINUS PARVIFLORA (Japanese white pine)	1	
PINUS PONDEROSA [ponderosa (western yellow) pine]	5	
PINUS RESINOSA [red (Norway) pine]	54	
PINUS RIGIDA (pitch pine)	4	
PINUS ROXBURGHII	1	
PINUS STROBUS [eastern white (Weymouth) pine]	135	
PINUS STROBUS VAR CHIAPENSIS	1	

SPECIES LIST/LISTE DES ESSENCES

SPECIES/ESSENCES	NUMBER OF SEEDLOTS PER SPECIES	NOMBRE DE LOTS DE SEMENCES PAR ESSENCE
PINUS SYLVESTRIS [Scotch (Scots) pine]	49	
PINUS SYLVESTRIS var. MONGOLICA	2	
PINUS SYLVESTRIS var. RIGENSIS	1	
PINUS THUNBERGII (Japanese black pine)	1	
PINUS WALLICHIANA [Himalayan (Bhutan) pine]	1	
PLADYCLADUS ORIENTALIS	1	
PLATANUS OCCIDENTALIS [American plane (sycamore)]	1	
PRUNUS SEROTINA (black cherry)	2	
PSEUDOTSUGA MENZIESII (douglas-fir)	24	
PSEUDOTSUGA SINENSIS (Chinese douglas-fir)	2	
PTELEA TRIFOLIATA (hop-tree)	1	
ROBINIA PSEUDOACACIA (black locust)	2	
SEQUOIADENDRON GIGANTEUM (giant sequoia)	1	
THUJA OCCIDENTALIS (eastern white cedar)	7	
THUJA PLICATA (western red cedar)	7	
TILIA AMERICANA (basswood! American linden)	6	
TILIA CORDATA (small-leaved lime)	1	
TILIA PLATYPHYLLOS (large-leaved lime)	3	
TSUGA CANADENSIS (eastern hemlock)	6	
TSUGA CHINENSIS VAR TCHEKIANGENSIS	1	
TSUGA DIVERSIFOLIA (northern Japanese hemlock)	1	
TSUGA FORESTII	1	
TSUGA HETEROPHYLLA (western hemlock)	3	
ULMUS AMERICANA [white (American) elm]	1	
TOTAL NUMBER OF SEEDLOTS IN SEEDBANK NOMBRE TOTAL DE LOTS DE SEMENCES DANS LA BANQUE	2133	

LEGEND FOR PNFI SEED LIST/LÉGENDE POUR LA LISTE DE SEMENCES DE L'IFNP

Column Name Nom de la colonne	Meaning Signification
SEED BANK NUMBER	. Seed bank number assigned to an individual seedlot by the National Tree Seed Centre . Numéro assigné à un lot de semences en banque par le Centre national de semences forestières
NURSERY NUMBER	. Seedlot number in seed index system maintained by Tree Breeding group at PNFI . Numéro assigné à un lot de semences dans le système d'indexation géré par le groupe de reproduction des arbres de l'IFNP
YEAR COLL	. Year of collection . Année de la récolte
PROVENANCE	. Usually the name of the nearest identifiable geographic location to a collection site . Habituellement, le nom de l'endroit géographique identifiable situé le plus près du lieu de récolte
PROV	. Canadian province or American state (consult Appendix A for full name) . Province canadienne ou Etat américain (consulter l'annexe A pour le nom complet)
CTRY	. Official country code (see Appendix B) . Code officiel du pays (voir l'annexe B)
LAT	. Latitude of collection in degrees and minutes . Latitude du lieu de récolte en degrés et minutes
LONG	. Longitude of collection in degrees and minutes . Longitude du lieu de récolte en degrés et minutes
ELEV	. Elevation of collection in metres . Altitude du lieu de récolte en mètres
COLL TYPE	. Collection type: 'S' refers to collection from single tree; 'B' indicates bulked or general collection from more than one tree, ( ) gives number of trees from which bulked collection was made; 'CP' is a controlled pollination cross; 'SP' refers to self-pollination; 'SQ' indicates squirrel collection . Types de récolte: 'S' signifie récolte sur un seul arbre; 'B' indique une récolte générale ou en grande quantité sur plus d'un arbre, ( ) indique le nombre d'arbres sur lesquels on a récolté les semences; 'CP' signifie croisement par pollinisation dirigée; 'SP' signifie autopollinisation; 'SQ' indique une récolte par des écureuils.

1000 SEED WEIGHT	. Average weight in grams of 1 000 seeds . Poids moyen de 1 000 semences en grammes
YEAR TSTD	. Year of most recent germination test . Année du test de germination le plus récent
% GERM	. Result from most recent germination test; if blank, no germination information is available . Résultat du plus récente test de germination; un espace inoccupé signifie que l'on ne dispose pas de renseignements sur la germination
REMARKS	. 'ST....' identifies select tree from which collection was made . 'V....' refers to PNFI clone number . 'ST....' identifie l'arbre sélectionné pour la récolte des semences . 'V....' renvoie au numéro de clone de l'IFNP

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
(1.100) ABIES ALBA (European silver fir)													
1.100-0080006.0		1983	GERARDMER		FRA	48.04	6.53E		N/A	43.96	84	38.5	VIA VERSEPUY
1.100-8380643.0		1983	MARGERIDE MOUNTAINS		FRA	45.00	3.30E		N/A	46.74	84	28.5	VIA VERSEPUY
(1.300) ABIES BALSAMEA (balsam fir)													
1.300-6030290.0	S 96-60	1960	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	N/A	7.54	83	24.0	
1.300-6632380.0	S 129-66	1966	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	B	10.06	84	41.0	
1.300-7034170.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	65	S	6.83	84	30.0	CRF,S.0141,11cm,6m
1.300-7034180.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	67	S	7.82	84	31.0	CRF,S.0142,14cm,8m
1.300-7034190.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	74	S	7.48	84	59.0	CRF,S.0143,14cm,8m
1.300-7034200.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	68	S	7.73	84	43.0	CRF,S.0144,17cm,9m
1.300-7034220.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	67	S	8.67	84	51.0	CRF,S.0146,12cm,8m
1.300-7034230.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	67	S	8.76	84	58.0	CRF,S.0147,13cm,8m
1.300-7034240.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	67	S	8.96	84	27.0	CRF,S.0148,12cm,8m
1.300-7034250.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.25	75.34	65	S	8.47	84	20.0	CRF,S.0149,14cm,7m
1.300-7311350.0		1973	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.15	120	N/A	8.48	83	42.0	
1.300-7311360.0		1973	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.15	120	N/A	7.90	83	45.8	
1.300-7432000.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	9.09	83	59.5	13cm,11m
1.300-7432010.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	8.44	83	25.0	15cm,13m
1.300-7432030.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	10.10	83	62.0	15cm,11m
1.300-7432040.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	9.74	83	44.2	19cm,14m
1.300-7432060.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	8.06	83	33.5	13cm,10m
1.300-7432080.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	8.00	83	78.5	10cm,8m
1.300-7832250.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	B	11.20	83	41.0	
1.300-7832260.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	11.15	83	69.0	ST.3591
1.300-7832270.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	10.22	83	81.0	ST.3592
1.300-7832280.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	9.53	83	43.0	ST.3593
1.300-7832290.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	10.67	83	43.0	ST.3594
1.300-7832300.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	8.06	83	31.5	ST.3595
1.300-7931160.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	180	S	9.86	83	36.5	
1.300-7931180.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	180	S	9.72	83	55.7	
1.300-7931190.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	180	S	9.74	83	59.2	
1.300-7931200.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	180	S	10.18	83	25.0	
1.300-8284670.0		1982	PITTSTON FARM	ME	USA	45.45	69.45		N/A	5.65	83	33.0	
(1.350) ABIES BALSAMEA var. PHANEROLEPIS													
1.350-7003940.0		1970	GRAND FALLS	NFLD	CAN	48.55	55.51	110	B(2)	8.83	83	47.5	15-25cm,5-11m,25w
(1.450) ABIES FIRMA (Japanese fir)													
1.450-7484380.0		1974	SHIZUOKA PREFECTURE		JPN	35.09	137.5AE	660	B	47.10	75	28.0	
(1.500) ABIES GRANDIS (grand fir)													
1.500-7473860.0		1974	VICTORIA	BC	CAN	48.29	123.26	90	B(3)	21.57	83	34.5	36cm,23-24m,100w

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
(1.600) ABIES LASIOCARPA (alpine fir)													
1.600-7473110.0		1974	MONASHEE MOUNTAINS	BC	CAN	51.05	118.35	1830	B	9.06	83	52.5	
1.600-7473120.0		1974	SHUSWAP LAKE	BC	CAN	50.58	119.30	1370	R	10.78	83	54.0	
1.600-7473870.0		1974	MANNING PROV. PARK	BC	CAN	49.05	120.45	1220	S	7.36	83	84.5	26cm;9m
1.600-7477310.0		1974	MCGILLIVRAY LAKE	BC	CAN	50.51	119.51	1448	R	10.00	83	37.0	
1.600-7971830.0		1979	HUDSONS BAY MOUNTAIN	BC	CAN	54.45	127.15	1130	R(6)	10.35	83	46.5	10-25cm;6-15m
(1.670) ABIES NORDMANNIANA (Nordmann fir)													
1.670-0080007.0			CHAROLLAIS MOUNTAINS		FRA	46.30	4.30E		N/A	44.74	84	40.0	VIA VERSEPUY
(2.290) ACER JAPONICUM (Japanese maple)													
2.290-8330074.0		1983	MOUNT PLEASANT CEMETERY	ONT	CAN	43.42	79.23	150	R(3)	33.71	84		64% FRESH
(2.350) ACER NEGUNDO (Manitoba maple; box-elder)													
2.350-8330024.0		1983	SHERWOOD PK, TORONTO	ONT	CAN	43.43	79.23	152	S	48.96	84	18.7	12cm;6m
2.350-8330032.0		1983	SHERWOOD PK, TORONTO	ONT	CAN	43.43	79.23	150	S	70.57	84	38.6	13cm;6m
(2.500) ACER PLATANOIDES (Norway maple)													
2.500-7230510.0		1972	OTTAWA	ONT	CAN	45.25	75.42		N/A		84		84% FRESH
2.500-7683970.0	810245	1976	VITEBSK OBLAST, U.S.S.R.		SUN	55.00	30.00E		R		**		
2.500-7684000.0	810248	1976	VITEBSK OBLAST, U.S.S.R.		SUN	55.00	30.00E		S		84		92% FKESH
2.500-8180990.0		1981	CHERKESSKAYA OBLAST		SUN	44.00	42.00E		B		84		80% FKESH
2.500-8181000.0		1981	VINNITSKAYA OBLAST		SUN	49.00	28.00E		R		84		94% FRESH
2.500-8330026.0		1983	SHERWOOD PARK, TORONTO	ONT	CAN	43.43	79.23	158	S	169.27	84		FR50%,20cm;8m
2.500-8330137.0		1983	SHERWOOD PARK, TORONTO	ONT	CAN	43.43	79.23	158	S		84		FR85%,15cm;7m
2.500-8330139.0		1983	SHERWOOD PARK, TORONTO	ONT	CAN	43.43	79.23	158	S	161.93	84	49.3	30cm;7m
2.500-8330641.0		1983	SHERWOOD PARK, TORONTO	ONT	CAN	43.43	79.23	158	S		**		
(2.550) ACER PSEUDOPLATANUS (sycamore maple)													
2.550-8330072.0		1983	QUEEN'S PARK, TORONTO	ONT	CAN	43.40	79.23	107	S	246.08	84	64.0	65cm;11m
2.550-8330073.0		1983	QUEEN'S PARK, TORONTO	ONT	CAN	43.40	79.23	107	S		84	28.0	50cm;10m
(2.600) ACER RUBRUM [red (soft) maple]													
2.600-7030010.0	810135	1970	PETAWAWA	ONT	CAN	45.53	77.16	150	S	16.71	75	20.0	
2.600-7033120.0	810136	1970	GREENWOOD	ONT	CAN	45.46	77.02	140	S		**		39cm;17m
2.600-7130010.0	810140	1971	PET. FOR. EXP. STATION	ONT	CAN	45.60	77.25	150	R		**		10-22m;30-50w
2.600-7130100.0	810147	1971	PETAWAWA	ONT	CAN	45.53	77.16	150	S		**		
2.600-7130120.0	810149	1971	PETAWAWA	ONT	CAN	45.53	77.16	150	S		**		
2.600-7230500.0	810153	1972	CENTRAL RESEARCH FOREST	ONT	CAN	45.24	75.33	70	S		**		
2.600-7430090.0	810157	1974	PETAWAWA	ONT	CAN	45.55	77.16	110	S	31.00	**		8cm;8m
2.600-7530060.0	810160	1975	CHALK RIVER	ONT	CAN	46.05	77.23	150	R		**		5-10cm;11m

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
2.600-7530070.0	810161	1975	CHALK RIVER	ONT	CAN	46.05	77.23	150	S		75	62.0	15cm,12m
2.600-7530080.0	810162	1975	CHALK RIVER	ONT	CAN	46.05	77.23	150	S	13.04	84	23.0	15cm,11m
2.600-7530090.0	810163	1975	CHALK RIVER	ONT	CAN	46.05	77.23	150	S		**		15-20cm,12m
2.600-7530100.0	810164	1975	CHALK RIVER	ONT	CAN	46.05	77.23	150	S		**		18cm,14m
2.600-7530110.0	810165	1975	CHALK RIVER	ONT	CAN	46.05	77.23	150	S		**		18cm,11m
2.600-7530120.0	810166	1975	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25	120	R		**		5-20cm,11m
2.600-7530130.0	810167	1975	CHALK RIVER	ONT	CAN	46.05	77.23	150	S	14.72	84	20.0	10cm,8m
2.600-7530150.0	810169	1975	PETAWAWA	ONT	CAN	45.54	77.14	110	S		**		
2.600-7530160.0		1975	FORT FRANCES	ONT	CAN	48.40	93.15	350	R(5)		**		3-15cm,3-14m
2.600-7530180.0		1975	KENORA	ONT	CAN	49.38	93.50	380	B(10)		75	83.0	5-10cm
2.600-7530190.0		1975	FORT FRANCES	ONT	CAN	48.53	93.00	365	R(11)		75	80.0	11-20m,55-100w
2.600-7620390.0		1976	LAUREAT	QUE	CAN	45.57	76.22	230	R(2)		**		11-15cm,10-12m
2.600-7620400.0		1976	LAUREAT	QUE	CAN	46.02	76.18	240	S		**		10cm,12m
2.600-7630010.0		1976	PET. FOR. EXP. STATION	ONT	CAN	48.59	77.23	150	S		76	30.0	
2.600-7630020.0		1976	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.23	150	S		76	27.0	
2.600-7630030.0		1976	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.24	150	S		76	84.0	
2.600-7630040.0		1976	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.24	160	R(2)		77	69.0	
2.600-7630060.0		1976	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	170	S		**		
2.600-7630070.0		1976	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.24	160	S		**		
2.600-7630100.0		1976	LONG BEACH	ONT	CAN	42.52	79.23	180	S		76	93.0	28cm,18m
2.600-7630110.0		1976	LONG BEACH	ONT	CAN	42.52	79.23	180	S		**		15cm,11m
2.600-7630120.0		1976	LONG BEACH	ONT	CAN	42.52	79.23	180	S		**		20cm,14m
2.600-7630130.0		1976	LONG BEACH	ONT	CAN	42.52	79.23	180	S		**		30cm,21m
2.600-7630140.0		1976	LONG BEACH	ONT	CAN	42.52	79.23	180	S		**		61cm,14m
2.600-7630150.0		1976	LONG BEACH	ONT	CAN	42.52	79.23	180	S		**		20cm,6m
2.600-7630170.0		1976	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.24	160	S		**		
2.600-7630180.0		1976	CHALK RIVER	ONT	CAN	46.03	77.23	170	S		**		
2.600-7630190.0		1976	CHALK RIVER	ONT	CAN	46.03	77.23	150	S		84	82.0	
2.600-7716320.0	810296	1977	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.22	75	S		77	75.0	15cm,9m,35w
2.600-7716330.0	810295	1977	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.22	75	S		77	73.0	15cm,11m,35w
2.600-7716340.0	810297	1977	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.22	75	S		77	72.0	15cm,11m,35w
2.600-7720400.0		1977	LAUREAT	QUE	CAN	45.56	76.22	240	S		77	69.0	
2.600-7720410.0		1977	LAUREAT	QUE	CAN	45.56	76.22	240	R		77	23.0	
2.600-7720420.0		1977	LAUREAT	QUE	CAN	45.56	76.22	240	S		77	39.0	
2.600-7730010.0		1977	MALAHIDE TWP.	ONT	CAN	42.44	81.00	230	S		77	24.0	28cm,17m
2.600-7730020.0		1977	MALAHIDE TWP.	ONT	CAN	42.44	81.00	230	S		77	38.0	61cm,15m
2.600-7730030.0		1977	MALAHIDE TWP.	ONT	CAN	42.44	81.00	230	S		77	44.0	41cm,11m
2.600-7730040.0		1977	MALAHIDE TWP.	ONT	CAN	42.44	81.00	230	S		77	71.0	30cm,20m
2.600-7730050.0		1977	MALAHIDE TWP.	ONT	CAN	42.44	81.00	230	S		77	57.0	13cm,9m
2.600-7730070.0		1977	ALLISTON	ONT	CAN	44.09	79.51	240	S		77	87.0	
2.600-7730080.0		1977	ORILLIA	ONT	CAN	44.33	79.27	210	S		77	64.0	
2.600-7730090.0		1977	WASAGA BEACH	ONT	CAN	44.32	80.01	180	S		77	76.0	
2.600-7730100.0		1977	WASAGA BEACH	ONT	CAN	44.32	80.01	180	S		77	38.0	
2.600-7730110.0		1977	ELMVALE	ONT	CAN	44.35	79.47	180	S		77	67.0	
2.600-7730120.0		1977	HUNTSVILLE	ONT	CAN	45.18	79.16	300	S		77	28.0	
2.600-7730140.0		1977	HUNTSVILLE	ONT	CAN	45.18	79.16	275	S		77	47.0	
2.600-7730150.0		1977	HUNTSVILLE	ONT	CAN	45.15	79.19	275	S		77	24.0	
2.600-7730160.0		1977	HUNTSVILLE	ONT	CAN	45.15	79.19	275	S		77	82.0	
2.600-7930020.0		1979	WAINFLEET	ONT	CAN	42.48	79.23	175	R(5)		79	78.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
2.600-7930030.0		1979	TERRA COTTA	ONT	CAN	43.44	79.55	275	B(5)		79	84.5	
2.600-7930040.0		1979	SEVERN BRIDGE	ONT	CAN	44.45	79.18	230	B(5)		79	80.0	
2.600-7930050.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.26	170	B(5)		79	61.0	
2.600-7930060.0		1979	MARTEN RIVER	ONT	CAN	46.41	79.45	300	B(5)		79	31.0	
2.600-7930070.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.58	77.26	180	S	16.67	80	48.0	ST.3738,5cm,7m
2.600-7930080.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.26	180	S	14.21	80	83.0	ST.3739,7cm,7m
2.600-7930090.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.58	77.26	180	S	17.79	80	84.3	7cm,9m
2.600-7930100.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.25	170	S		84	68.0	8m
2.600-7930110.0		1979	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.25	170	S		84	73.3	12m
2.600-8230070.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.24	150	B		82	55.5	RODENT DAMAGE
2.600-8230080.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	46.00	77.25	160	B		82	83.5	RODENT DAMAGE
2.600-8230090.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	46.00	77.26	150	B		82	67.0	RODENT DAMAGE
2.600-8230100.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	46.00	77.25	150	B		82	35.5	RODENT DAMAGE
2.600-8230110.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	46.00	77.24	150	B		82	73.5	RODENT DAMAGE
(2.800) ACER SACCHARUM [sugar (hard) maple]													
2.800-6730510.0	810172	1967	KIOSK	ONT	CAN	46.10	78.30	335	B		84		48% FRESH
2.800-6730520.0	810173	1967	LAKE DORE	ONT	CAN	45.36	77.06	150	B		84		36% FRESH
2.800-7435160.0	810180	1974	ALGONQUIN PARK	ONT	CAN	45.25	78.16	460	S		84		30% FRESH
2.800-7630640.0	810197	1976	CHALK RIVER	ONT	CAN	46.05	77.23	150	S		84		FR40%,46cm,14m
2.800-8232110.0		1982	OWEN SOUND	ONT	CAN	44.34	80.56		B		**		
2.800-8330022.0		1983	PELHAM TWP., FONTHILL	ONT	CAN	43.02	79.17	190	B(3)	84.73	84		FR84%,45cm,14-16m
2.800-8330065.0		1983	WELLAND	ONT	CAN	43.03	79.22		B(3)	87.20	84		FR87%,20-25m
2.800-8330077.0		1983	NIAGARA DISTRICT	ONT	CAN	43.00	79.30		S		**		
(3.100) AESCULUS HIPPOCASTANUM (common horsechestnut)													
3.100-8330011.0		1983	VINELAND, NIAGARA DIST.	ONT	CAN	43.09	79.23	90	B(2)	7410.00	84	56.0	40-100cm,13-15m
(4.100) ALNUS CRISPA (green alder)													
4.100-7931400.0	810978	1979	NIMITZ TWP.	ONT	CAN	47.38	83.15	460	B		79	89.2	
4.100-7961850.0		1979	SLAVE LAKE FOREST	ALTA	CAN	54.58	114.23	590	B(8)		**		
4.100-8130220.0		1981	STEVENSON LAKE	ONT	CAN	45.41	77.36	180	B	.16	84	9.0	
4.100-8310556.0	(NAC)	1983	TANTALLON	NS	CAN	44.42	63.52	99	B(30)	.19	84	19.0	0.5-2cm,2-3m
4.100-8310558.0	(NAC)	1983	TANTALLON	NS	CAN	44.42	63.52	99	S	.20	84	21.0	2cm,3m,5w
4.100-8310559.0	(NAC)	1983	TANTALLON	NS	CAN	44.42	63.52	99	S	.19	84	19.5	1cm,3m,7w
4.100-8310560.0	(NAC)	1983	TANTALLON	NS	CAN	44.42	63.52	99	S	.29	84	23.0	2cm,3m,8w
4.100-8310563.0	(NAC)	1983	YARMOUTH	NS	CAN	43.55	66.55	30	S	.20	83	20.0	3cm,3m,6w
4.100-8310564.0	(NAC)	1983	YARMOUTH	NS	CAN	43.55	66.55	30	S	.25	84	44.5	2cm,3m,4w
4.100-8310565.0	(NAC)	1983	YARMOUTH	NS	CAN	43.55	66.55	30	S	.34	84	51.5	1cm,2m,4w
4.100-8310566.0	(NAC)	1983	YARMOUTH	NS	CAN	43.55	66.55	30	S	.22	84	12.5	2cm,2m,5w
4.100-8310567.0	(NAC)	1983	YARMOUTH	NS	CAN	43.55	66.55	30	S	.22	84	13.0	2cm,3m,6w
4.100-8320554.0	(NAC)	1983	MISSISSIPPI RIVER	QUE	CAN	48.49	64.52	76	B(35)	.27	84	42.5	1-2cm,2-4m
4.100-8320555.0	(NAC)	1983	MISSISSIPPI RIVER	QUE	CAN	48.49	64.53	130	B(25)	.25	84	32.5	0.5-2cm,2-3m
4.100-8360544.0	(NAC)	1983	EDSON	ALTA	CAN	53.35	116.30		B(50)	.25	84	32.5	3-7cm,1-3m
4.100-8360545.0	(NAC)	1983	FORT MCMURRAY	ALTA	CAN	56.30	112.10		B*	.24	84	29.5	*(100),2-7cm,2-3m
4.100-8360546.0	(NAC)	1983	OBED SUMMIT	ALTA	CAN	53.30	117.10		B	.34	84	50.0	2-3cm,1-2m

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.100-8360547.0	(NAC)	1983	FORT ASSINIBOINE	ALTA	CAN	54.30	114.50		R	.35	84	65.0	2-3cm;1-2m
(4.300) ALNUS GLUTINOSA (black alder)													
4.300-7789300.0	810961	1977	MARBURG		DEU	50.40	9.10E	300	R	1.41	79	62.0	
4.300-7884440.0		1978	GOR'KIY OBLAST		SUN	56.00	44.00E		B		84	64.0	
4.300-7983170.0		1979	ORAJOE FOR DIST ESTONIA		SUN	57.58	24.27E	20	S		84	4.0	24cm;25m;75w
4.300-7983190.0		1979	HALLIKA FOR DIST ESTONIA		SUN	58.45	27.00E	20	R	.88	84	12.0	INCLUDES HYBRIDS
4.300-8180890.0		1981	TURKEY		TUR				N/A	1.04	84	43.0	
4.300-8181210.0		1981	CHERNIGOUSKAYA OBLAST		SUN	51.30	31.30E		R	1.53	**	8.7	
4.300-8181220.0		1981	ZHITOMIRSKAYA OBLAST		SUN	51.00	28.00E		R	1.28	**	6.0	
(4.400) ALNUS INCANA [grey (European) alder]													
4.400-7683860.0	810300	1976	TARTU RES. FOR., ESTONIA		SUN	58.22	26.46E	70	R	.61	79	14.0	
4.400-7931390.0	810981	1979	LAKE DORE	ONT	CAN	45.37	77.07	175	R	.78	84	75.0	
4.400-7983140.0		1979	TARTU, ESTONIA		SUN	58.24	26.43E	50	S	.92	84	90.0	10m;10w
4.400-7983150.0		1979	SURJU FOR DIST ESTONIA		SUN	58.19	24.40E	20	S		84	37.0	10m;10w
4.400-8130170.0		1981	LAKE DORE	ONT	CAN	45.37	77.07	175	B(3)	.85	84	21.0	
(4.500) ALNUS JAPONICA													
4.500-8180880.0		1981	HEILUNGKIANG		CHN	45.21	129.37E	430	R		**		
(4.600) ALNUS RUBRA [red (Oregon) alder]													
4.600-8071140.0		1980	BOWSER, VANCOUVER ISLAND	BC	CAN	49.20	124.40	50	R		**		
4.600-8071150.0		1980	BOTANICAL BAY, VANC. IS	BC	CAN	48.28	124.25	50	R	.52	84	65.0	
4.600-8071170.0		1980	SHAWNIGAN-RENFREW	BC	CAN	49.25	124.15	500	R	.54	84	75.0	VANC. ISLAND
4.600-8071180.0		1980	SHAWNIGAN, VANCOUVER IS	BC	CAN	48.36	123.40	190	R	.62	84	68.0	
4.600-8370230.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.24	84	18.5	37cm;27m;35w
4.600-8370231.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.55	84	18.5	40cm;26m;37w
4.600-8370232.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.65	84	41.5	45cm;31m;55w
4.600-8370233.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.46	84	27.5	28cm;25m;55w
4.600-8370234.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.47	84	12.0	40cm;28m;55w
4.600-8370235.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.64	84	60.0	29cm;28m;45w
4.600-8370239.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.41	84	12.5	36cm;23m;46w
4.600-8370241.0	(NAC)	1983	SPRUSTON ROAD	BC	CAN	49.03	123.56	107	S	.40	84	14.5	23cm;17m;47w
4.600-8370245.0	(NAC)	1983	HORNE LAKE	BC	CAN	49.21	124.43	122	S	.54	84	24.0	22cm;17m;26w
4.600-8370250.0	(NAC)	1983	HORNE LAKE	BC	CAN	49.21	124.43	122	S	.52	84	41.5	18cm;16m;23w
4.600-8370251.0	(NAC)	1983	HORNE LAKE	BC	CAN	49.21	124.43	122	S	.48	84	22.0	21cm;17m;24w
4.600-8370252.0	(NAC)	1983	HORNE LAKE	BC	CAN	49.21	124.43	122	S	.80	84	63.0	21cm;20m;26w
4.600-8370254.0	(NAC)	1983	HORNE LAKE	BC	CAN	49.21	124.43	122	S	.51	84	54.5	24cm;20m;35w
4.600-8370256.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.51	84	57.0	32cm;19m;27w
4.600-8370257.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.64	84	70.0	25cm;18m;20w
4.600-8370258.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.45	84	47.5	25cm;18m;22w
4.600-8370259.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.43	84	35.5	21cm;17m;23w
4.600-8370260.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.74	84	75.5	23cm;18m;21w
4.600-8370261.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.48	84	63.0	26cm;19m;19w

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.600-8370262.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.54	84	65.5	28cm,21m,26w
4.600-8370263.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.54	84	37.0	26cm,18m,23w
4.600-8370264.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.76	84	55.0	26cm,17m,32w
4.600-8370265.0	(NAC)	1983	SALMON RIVER	BC	CAN	50.12	125.45	304	S	.52	84	64.5	29cm,15m,27w
(4.700) ALNUS RUGOSA (speckled alder)													
4.700-7735800.0		1977	NIPISSING TWP.	ONT	CAN	46.04	79.29	200	R(4)	.83	79	26.0	
4.700-7981860.0		1979	PENOBSCOT RIVER	ME	USA	45.00	69.00	40	R(20)	.59	84	40.0	3-5m,5-6w
4.700-8130150.0		1981	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.26	180	R(5)	.82	84	13.0	
4.700-8130190.0		1981	STEVENSON LAKE	ONT	CAN	45.41	77.36	180	R		**		
4.700-8310202.0	(NAC)	1983	ENMORE	PEI	CAN	46.35	64.03	10	R(45)	.63	84	22.5	2-5cm,3-4m
4.700-8310203.0	(NAC)	1983	MILLVALE	PEI	CAN	46.24	63.24	70	R(30)	.85	84	29.0	2-6cm,3-5m
4.700-8310204.0	(NAC)	1983	VALLEYFIELD	PEI	CAN	46.08	62.43	45	R(25)	.78	84	34.0	4-6cm,3-5m
4.700-8310548.0	(NAC)	1983	SHEDIAC	NB	CAN	46.14	64.35	15	R(20)	.65	84	23.0	2-6cm,3-6m
4.700-8310549.0	(NAC)	1983	SHEDIAC	NB	CAN	46.14	64.35	15	S	.75	84	14.5	3cm,4m,6w
4.700-8310551.0	(NAC)	1983	SHEDIAC	NB	CAN	46.14	64.35	15	S	1.00	84	38.5	3cm,4m,8w
4.700-8310552.0	(NAC)	1983	SHEDIAC	NB	CAN	46.14	64.35	15	S	.70	84	33.0	4cm,5m,12w
4.700-8310553.0	(NAC)	1983	SHEDIAC	NB	CAN	46.14	64.35	15	S	.65	84	30.0	3cm,4m,8w
4.700-8330180.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	R(10)	.67	84	37.0	4-10cm,3-5m
4.700-8330181.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.75	84	39.5	6cm,4m
4.700-8330182.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.79	84	69.5	6cm,4m
4.700-8330183.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.78	84	86.5	6cm,4m
4.700-8330184.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.84	84	81.0	5cm,2.5m
4.700-8330185.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.81	84	62.5	4cm,4m
4.700-8330186.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.61	84	30.5	4cm,3.5m
4.700-8330187.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	1.04	84	68.5	5cm,4m
4.700-8330188.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.85	84	57.0	3cm,4m
4.700-8330189.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.63	84	27.0	4cm,3.5m
4.700-8330190.0	(NAC)	1983	HWY 17 NEAR PEMBROKE	ONT	CAN	45.50	77.15	150	S	.80	84	63.5	3cm,4m
4.700-8330191.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	R(20)	.61	84	44.0	4-10cm,3-5m
4.700-8330192.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.77	84	34.5	6cm,4m
4.700-8330193.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	1.01	84	80.5	5cm,3.5m
4.700-8330194.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.61	84	17.5	7cm,4m
4.700-8330195.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.83	84	50.5	6cm,4m
4.700-8330196.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.67	84	25.5	6cm,4m
4.700-8330197.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.79	84	40.5	5cm,3.5m
4.700-8330198.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.70	84	50.5	7cm,4m
4.700-8330199.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.64	84	17.5	6cm,4m
4.700-8330200.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.71	84	47.5	6cm,4m
4.700-8330201.0	(NAC)	1983	HWY 417 NEAR OTTAWA	ONT	CAN	45.20	76.30	75	S	.77	84	58.0	6cm,4m
(4.800) ALNUS SINUATA (sitka alder)													
4.800-7971840.0	S10985	1979	MCKENDRICK PASS	BC	CAN	54.50	126.45	1190	R(20)	.53	84	84.0	3-8cm,1-5m
4.800-8071210.0		1980	CRANBROOK	BC	CAN	49.35	117.05	640	R	.26	84	35.0	
4.800-8370208.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	R*	.47	84	91.5	*(25),3-7cm,2-5m
4.800-8370209.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	R*	.75	84	74.5	*(25),5-15cm,2-7m
4.800-8370210.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	R(40)	.42	84	76.0	5-8cm,2-5m

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SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.800-8370213.0	(NAC)	1983	CHINA NOSE MT. SUMMIT	BC	CAN	54.27	126.08	1430	R*	.31	84	18.5	*(30+),2-6cm,2-3m
4.800-8370214.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	R*	.34	84	50.0	*(50+),2-5cm,1-3m
4.800-8370217.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	R(40)	.39	84	59.0	1-10cm,2-7m
4.800-8370219.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	R*	.35	84	43.0	*(40+),2-10cm,1-6m
4.800-8370220.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	R*	.31	84	37.5	*(50+),2-8cm,1-4m
4.800-8370222.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	R*	.27	84	29.0	*(20+),2-5cm,1-3m
4.800-8370229.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	R*	.41	84	60.5	*(30+),2-5cm,1-4m
4.800-8370242.0	(NAC)	1983	GREEN MT.	BC	CAN	49.03	124.21	1100	R*	.49	84	51.0	*(40),1-7cm,2-5m
4.800-8370243.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	R*	.52	84	72.5	*(25),2-6cm,2-5m
4.800-8370244.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	R*	.53	84	64.5	*(45),1-7cm,1-4m
4.800-8370255.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	B(20)	.39	84	31.5	1-6cm,1-4m
4.800-8370266.0	(NAC)	1983	ROBERTS LAKE	BC	CAN	50.13	125.30	366	R*	.36	84	20.5	*(35),1-5cm,1-4m
4.800-8370277.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.43	84	79.0	SILT LOAM
4.800-8370278.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.45	84	78.0	SILT LOAM
4.800-8370279.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.39	84	79.0	SILT LOAM
4.800-8370280.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.55	84	73.5	SILT LOAM
4.800-8370281.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.35	84	52.0	SILT LOAM
4.800-8370282.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.42	84	81.0	SILT LOAM
4.800-8370283.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.37	84	56.5	SILT LOAM
4.800-8370284.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.38	84	51.0	SILT LOAM
4.800-8370285.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.38	84	81.0	SILT LOAM
4.800-8370286.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.45	130.03	869	S	.44	84	59.0	SILT LOAM
4.800-8370297.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.29	84	43.5	ON STEEP HILL
4.800-8370298.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.31	84	47.5	ON STEEP HILL
4.800-8370299.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.34	84	42.0	ON STEEP HILL
4.800-8370300.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.33	84	72.0	ON STEEP HILL
4.800-8370301.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.38	84	74.0	ON STEEP HILL
4.800-8370302.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.43	84	62.0	ON STEEP HILL
4.800-8370303.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.38	84	63.5	ON STEEP HILL
4.800-8370304.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.30	84	71.5	ON STEEP HILL
4.800-8370305.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.23	84	30.5	ON STEEP HILL
4.800-8370306.0	(NAC)	1983	STIKINE RIVER	BC	CAN	58.00	130.02	915	S	.47	84	79.0	ON STEEP HILL
4.800-8370317.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.31	84	14.0	GRAVEL, FAIR SITE
4.800-8370318.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.30	84	25.0	GRAVEL, FAIR SITE
4.800-8370319.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.38	84	12.5	GRAVEL, FAIR SITE
4.800-8370320.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.36	84	20.0	GRAVEL, FAIR SITE
4.800-8370321.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.33	84	18.5	GRAVEL, FAIR SITE
4.800-8370322.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.33	84	10.5	GRAVEL, FAIR SITE
4.800-8370323.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.32	84	17.5	GRAVEL, FAIR SITE
4.800-8370325.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.38	84	76.0	GRAVEL, FAIR SITE
4.800-8370326.0	(NAC)	1983	CHINA NOSE SUMMIT	BC	CAN	54.27	126.08	1430	S	.36	84	11.5	GRAVEL, FAIR SITE
4.800-8370327.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.40	84	68.0	SANDY GRAVEL
4.800-8370328.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.36	84	78.0	SANDY GRAVEL
4.800-8370329.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.33	84	52.0	SANDY GRAVEL
4.800-8370330.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.56	84	69.5	SANDY GRAVEL
4.800-8370331.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.41	84	93.5	SANDY GRAVEL
4.800-8370332.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.42	84	71.0	SANDY GRAVEL
4.800-8370333.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.45	84	84.0	SANDY GRAVEL
4.800-8370334.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.45	84	39.5	SANDY GRAVEL

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.800-8370335.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.42	84	77.5	SANDY GRAVEL
4.800-8370336.0	(NAC)	1983	VANDERHOOF	BC	CAN	53.56	123.49	1287	S	.34	84	86.0	SANDY GRAVEL
4.800-8370357.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.25	84	25.0	GRAVEL LOAM
4.800-8370358.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.43	84	58.0	GRAVEL LOAM
4.800-8370359.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.53	84	55.0	GRAVEL LOAM
4.800-8370360.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.46	84	80.0	GRAVEL LOAM
4.800-8370361.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.40	84	42.5	GRAVEL LOAM
4.800-8370362.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.28	84	35.5	GRAVEL LOAM
4.800-8370363.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.33	84	23.5	GRAVEL LOAM
4.800-8370364.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.40	84	72.5	GRAVEL LOAM
4.800-8370365.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.42	84	43.5	GRAVEL LOAM
4.800-8370366.0	(NAC)	1983	COLD CREEK	BC	CAN	50.49	120.07	1310	S	.32	84	70.0	GRAVEL LOAM
4.800-8370377.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.24	84	11.0	GRAVEL, 30% SLOPE
4.800-8370378.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.34	84	52.0	GRAVEL, 30% SLOPE
4.800-8370379.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.36	84	34.0	GRAVEL, 30% SLOPE
4.800-8370380.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.46	84	59.5	GRAVEL, 30% SLOPE
4.800-8370381.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.29	84	24.5	GRAVEL, 30% SLOPE
4.800-8370382.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.43	84	69.0	GRAVEL, 30% SLOPE
4.800-8370383.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.38	84	22.5	GRAVEL, 30% SLOPE
4.800-8370385.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.32	84	24.5	GRAVEL, 30% SLOPE
4.800-8370386.0	(NAC)	1983	ADAMS PLATEAU	BC	CAN	51.06	119.33	1280	S	.38	84	14.0	GRAVEL, 30% SLOPE
4.800-8370387.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.35	84	32.5	ROCKY CLAY LOAM
4.800-8370389.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.47	84	59.5	ROCKY CLAY LOAM
4.800-8370390.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.38	84	69.0	ROCKY CLAY LOAM
4.800-8370391.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.45	84	25.5	ROCKY CLAY LOAM
4.800-8370392.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.31	84	33.0	ROCKY CLAY LOAM
4.800-8370393.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.32	84	38.0	ROCKY CLAY LOAM
4.800-8370395.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.27	84	34.5	ROCKY CLAY LOAM
4.800-8370396.0	(NAC)	1983	ROGERS PASS	BC	CAN	51.19	117.34	1219	S	.40	84	63.5	ROCKY CLAY LOAM
4.800-8370407.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	S	.39	84	78.5	GRAVEL, POOR SITE
4.800-8370409.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	S	.36	84	32.5	GRAVEL, POOR SITE
4.800-8370412.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	S	.25	84	18.5	GRAVEL, POOR SITE
4.800-8370413.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	S	.37	84	82.0	GRAVEL, POOR SITE
4.800-8370414.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	S	.39	84	79.0	GRAVEL, POOR SITE
4.800-8370415.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	S	.32	84	15.0	GRAVEL, POOR SITE
4.800-8370416.0	(NAC)	1983	GALENA BAY	BC	CAN	50.35	117.52	607	S	.28	84	32.0	GRAVEL, POOR SITE
4.800-8370447.0	(NAC)	1983	PHOENIX	BC	CAN	49.05	118.35	1219	S	.28	84	11.5	CLAY LOAM
4.800-8370449.0	(NAC)	1983	PHOENIX	BC	CAN	49.05	118.35	1219	S	.31	84	12.0	CLAY LOAM
4.800-8370467.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.42	84	54.5	SANDY SILT
4.800-8370468.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.36	84	30.5	SANDY SILT
4.800-8370469.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.50	84	53.5	SANDY SILT
4.800-8370470.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.36	84	59.5	SANDY SILT
4.800-8370471.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.36	84	33.5	SANDY SILT
4.800-8370472.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.42	84	66.0	SANDY SILT
4.800-8370473.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.48	84	59.5	SANDY SILT
4.800-8370474.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.50	84	74.5	SANDY SILT
4.800-8370475.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.47	84	70.5	SANDY SILT
4.800-8370476.0	(NAC)	1983	HOPE SLIDE	BC	CAN	49.16	121.15	762	S	.39	84	81.0	SANDY SILT
4.800-8370477.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.43	84	29.5	SANDY LOAM

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.800-8370478.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.62	84	74.5	SANDY LOAM
4.800-8370479.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.52	84	58.0	SANDY LOAM
4.800-8370480.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.50	84	49.0	SANDY LOAM
4.800-8370481.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.68	84	69.0	SANDY LOAM
4.800-8370482.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.55	84	48.5	SANDY LOAM
4.800-8370483.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.72	84	76.0	SANDY LOAM
4.800-8370484.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.44	84	47.0	SANDY LOAM
4.800-8370485.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.50	84	52.5	SANDY LOAM
4.800-8370486.0	(NAC)	1983	GREEN MOUNTAIN	BC	CAN	49.03	124.21	1100	S	.63	84	82.5	SANDY LOAM
4.800-8370487.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.76	84	85.0	ROCKY LOAM
4.800-8370488.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.61	84	74.5	ROCKY LOAM
4.800-8370489.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.70	84	87.0	ROCKY LOAM
4.800-8370490.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.64	84	89.5	ROCKY LOAM
4.800-8370491.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.54	84	87.0	ROCKY LOAM
4.800-8370492.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.42	84	65.0	ROCKY LOAM
4.800-8370493.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.36	84	58.0	ROCKY LOAM
4.800-8370494.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.40	84	35.0	ROCKY LOAM
4.800-8370495.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.49	84	74.0	ROCKY LOAM
4.800-8370496.0	(NAC)	1983	MT. ARROWSMITH	BC	CAN	49.14	124.36	1150	S	.64	84	61.5	ROCKY LOAM
4.800-8370497.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.34	84	36.5	ROCKY LOAM
4.800-8370498.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.33	84	23.0	ROCKY LOAM
4.800-8370499.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.42	84	56.5	ROCKY LOAM
4.800-8370500.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.43	84	68.5	ROCKY LOAM
4.800-8370501.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.57	84	79.5	ROCKY LOAM
4.800-8370502.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.43	84	80.5	ROCKY LOAM
4.800-8370503.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.49	84	71.5	ROCKY LOAM
4.800-8370504.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.44	84	67.5	ROCKY LOAM
4.800-8370505.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.56	84	80.5	ROCKY LOAM
4.800-8370506.0	(NAC)	1983	SPROAT LAKE	BC	CAN	49.18	125.04	640	S	.53	84	87.5	ROCKY LOAM
4.800-8370507.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.30	84	11.0	ROCKY LOAM
4.800-8370508.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.42	84	57.5	ROCKY LOAM
4.800-8370509.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.56	84	50.5	ROCKY LOAM
4.800-8370510.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.35	84	26.0	ROCKY LOAM
4.800-8370511.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.34	84	52.0	ROCKY LOAM
4.800-8370512.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.56	84	48.0	ROCKY LOAM
4.800-8370513.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.54	84	41.0	ROCKY LOAM
4.800-8370514.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.54	84	43.5	ROCKY LOAM
4.800-8370515.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.43	84	43.5	ROCKY LOAM
4.800-8370516.0	(NAC)	1983	MCKAY LAKE	BC	CAN	49.45	125.17	914	S	.41	84	35.0	ROCKY LOAM
4.800-8370517.0	(NAC)	1983	ROBERTS LAKE	BC	CAN	50.13	125.30	366	S	.32	84	30.5	ROCKY LOAM
4.800-8370521.0	(NAC)	1983	ROBERTS LAKE	BC	CAN	50.13	125.30	366	S	.40	84	38.0	ROCKY LOAM
4.800-8370522.0	(NAC)	1983	ROBERTS LAKE	BC	CAN	50.13	125.30	366	S	.34	84	18.0	ROCKY LOAM
4.800-8370523.0	(NAC)	1983	ROBERTS LAKE	BC	CAN	50.13	125.30	366	S	.29	84	17.5	ROCKY LOAM
4.800-8370524.0	(NAC)	1983	ROBERTS LAKE	BC	CAN	50.13	125.30	366	S	.35	84	21.0	ROCKY LOAM
4.800-8370535.0	(NAC)	1983	GOLDEN	BC	CAN	51.30	117.20		B*	.41	84	70.8	*(100),3-5cm,2-4m
4.800-8370536.0	(NAC)	1983	VALEMOUNT	BC	CAN	52.50	119.15		B*	.29	84	23.8	*(100),2-7cm,1-3m

(4.900) ALNUS TENUIFOLIA (mountain alder)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.900-8071200.0		1980	CRANBROOK	BC	CAN	49.30	117.47	712	B	.47	84	22.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.900-8360537.0	(NAC)	1983	HINTON	ALTA	CAN	53.25	117.45		B(20)	.54	84	28.5	10cm,8-10m
4.900-8360538.0	(NAC)	1983	FT. ASSINIBOINE	ALTA	CAN	54.30	114.50		B	.67	84	37.0	10-20cm,6-7m
4.900-8360540.0	(NAC)	1983	FT. ASSINIBOINE	ALTA	CAN	54.30	114.50		B(20)	.50	84	32.5	10-12cm,5-6m
4.900-8360542.0	(NAC)	1983	WANDERING RIVER	ALTA	CAN	55.20	112.30		B(50)	.50	84	33.0	5-8cm,2-4m
4.900-8360543.0	(NAC)	1983	EDSON	ALTA	CAN	53.35	116.30		B	.50	84	28.0	10-12cm,5-6m
4.900-8370211.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	B(32)	.87	84	82.5	6-12cm,6-8m
4.900-8370212.0	(NAC)	1983	HOUSTON	BC	CAN	54.29	126.13	533	B(25)	.78	84	35.0	2-20cm,3-6m
4.900-8370215.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	B*	.67	84	52.0	*(27),2-20cm,2-10m
4.900-8370216.0	(NAC)	1983	CACHE CREEK	BC	CAN	50.59	121.28	541	B(20)	.54	84	13.5	5-10cm,3-10m
4.900-8370218.0	(NAC)	1983	LOUIS CREEK	BC	CAN	40.51	120.00	726	B(45)	.52	84	10.0	5-15cm,5-10m
4.900-8370221.0	(NAC)	1983	THREE VALLEY GAP	BC	CAN	50.59	118.33	518	B*	.48	84	36.0	*(40+),2-10cm,3-7m
4.900-8370269.0	(NAC)	1983	HOUSTON	BC	CAN	54.29	126.13	533	S	.58	84	11.0	SANDY, RIVER BANK
4.900-8370270.0	(NAC)	1983	HOUSTON	BC	CAN	54.29	126.13	533	S	.59	84	18.5	SANDY, RIVER BANK
4.900-8370271.0	(NAC)	1983	HOUSTON	BC	CAN	54.29	126.13	533	S	.49	84	11.0	SANDY, RIVER BANK
4.900-8370275.0	(NAC)	1983	HOUSTON	BC	CAN	54.29	126.13	533	S	.66	84	17.0	SANDY, RIVER BANK
4.900-8370287.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.73	84	94.0	SILT LOAM
4.900-8370288.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.67	84	81.0	SILT LOAM
4.900-8370289.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.80	84	78.0	SILT LOAM
4.900-8370290.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.61	84	63.5	SILT LOAM
4.900-8370291.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.77	84	70.0	SILT LOAM
4.900-8370292.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.70	84	91.5	SILT LOAM
4.900-8370293.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.44	84	30.0	SILT LOAM
4.900-8370294.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.64	84	92.0	SILT LOAM
4.900-8370295.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.67	84	78.5	SILT LOAM
4.900-8370296.0	(NAC)	1983	DEASE LAKE	BC	CAN	58.32	130.00	817	S	.61	84	73.5	SILT LOAM
4.900-8370307.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.64	84	73.0	LOAMY SOIL
4.900-8370308.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.71	84	60.5	LOAMY SOIL
4.900-8370309.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.63	84	62.0	LOAMY SOIL
4.900-8370310.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.53	84	36.0	LOAMY SOIL
4.900-8370311.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.82	84	61.5	LOAMY SOIL
4.900-8370312.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.73	84	63.5	LOAMY SOIL
4.900-8370313.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.69	84	71.0	LOAMY SOIL
4.900-8370314.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.79	84	64.5	LOAMY SOIL
4.900-8370315.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.81	84	57.0	LOAMY SOIL
4.900-8370316.0	(NAC)	1983	ISKUT	BC	CAN	57.53	130.00	1033	S	.94	84	40.5	LOAMY SOIL
4.900-8370337.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.62	84	45.5	PEAT, FAIR GROWTH
4.900-8370338.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.91	84	59.5	PEAT, FAIR GROWTH
4.900-8370339.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.66	84	20.0	PEAT, FAIR GROWTH
4.900-8370340.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.74	84	62.0	PEAT, FAIR GROWTH
4.900-8370341.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.63	84	29.0	PEAT, FAIR GROWTH
4.900-8370342.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.74	84	17.0	PEAT, FAIR GROWTH
4.900-8370343.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.58	84	34.5	PEAT, FAIR GROWTH
4.900-8370344.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.68	84	44.5	PEAT, FAIR GROWTH
4.900-8370345.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.56	84	38.0	PEAT, FAIR GROWTH
4.900-8370346.0	(NAC)	1983	BOBTAIL	BC	CAN	53.57	123.28	1152	S	.68	84	31.5	PEAT, FAIR GROWTH
4.900-8370356.0	(NAC)	1983	CACHE CREEK	BC	CAN	50.59	121.28	541	S	.59	84	50.5	GOOD SITE QUALITY
4.900-8370371.0	(NAC)	1983	LOUIS CREEK	BC	CAN	40.51	120.00	726	S	.50	84	12.0	LOAM, FAIR SITE
4.900-8370373.0	(NAC)	1983	LOUIS CREEK	BC	CAN	40.51	120.00	726	S	.39	84	12.5	LOAM, FAIR SITE
4.900-8370376.0	(NAC)	1983	LOUIS CREEK	BC	CAN	40.51	120.00	726	S	.54	84	15.0	LOAM, FAIR SITE

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
4.900-8370397.0	(NAC)	1983	THREE VALLEY GAP	BC	CAN	50.59	118.33	518	S	.49	84	28.0	BOG, WET SITE
4.900-8370398.0	(NAC)	1983	THREE VALLEY GAP	BC	CAN	50.59	118.33	518	S	.44	84	25.0	BOG, WET SITE
4.900-8370400.0	(NAC)	1983	THREE VALLEY GAP	BC	CAN	50.59	118.33	518	S	.42	84	35.5	BOG, WET SITE
4.900-8370401.0	(NAC)	1983	THREE VALLEY GAP	BC	CAN	50.59	118.33	518	S	.35	84	25.5	BOG, WET SITE
4.900-8370404.0	(NAC)	1983	THREE VALLEY GAP	BC	CAN	50.59	118.33	518	S	.42	84	10.5	BOG, WET SITE
4.900-8370417.0	(NAC)	1983	NAKUSP	BC	CAN	50.18	117.50	468	S	.41	84	10.5	GRAVEL LOAM
4.900-8370418.0	(NAC)	1983	NAKUSP	BC	CAN	50.18	117.50	468	S	.42	84	12.0	GRAVEL LOAM
4.900-8370419.0	(NAC)	1983	NAKUSP	BC	CAN	50.18	117.50	468	S	.60	84	44.5	GRAVEL LOAM
4.900-8370425.0	(NAC)	1983	NAKUSP	BC	CAN	50.18	117.50	468	S	.63	84	12.5	GRAVEL LOAM
4.900-8370539.0	(NAC)	1983	VALEMOUNT	BC	CAN	52.50	119.15		R(50)	.58	84	40.5	3-10cm;2-8m

(B.100) BETULA ALLEGHANIENSIS (yellow birch)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
B.100-5030060.0		1950	ANGUS	ONT	CAN	44.19	79.53		N/A		**		50-530
B.100-5830350.0		1958	P.F.F.S. BRANSTEAD RD	ONT	CAN	45.59	77.26		N/A		84	10.0	NW OF WATER HOLE
B.100-6630530.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	200	S	.93	74	57.0	
B.100-6720440.0		1967	HARRINGTON	QUE	CAN	45.51	74.38	170	R(10)		74	43.0	
B.100-6730280.0		1967	KIOSK	ONT	CAN	46.10	78.30	335	S	.62	82	31.8	64cm;23m;235-250w
B.100-6730290.0		1967	KIOSK	ONT	CAN	46.10	78.30	335	S		74	24.0	43cm;23m;250w
B.100-6730300.0		1967	KIOSK	ONT	CAN	46.10	78.30	335	S	.92	70	82.0	56cm;21m
B.100-6730310.0		1967	KIOSK	ONT	CAN	46.10	78.30	335	S		80	71.8	64cm;19m
B.100-6730320.0		1967	KIOSK	ONT	CAN	46.10	78.30	335	S	1.14	74	74.0	53cm;20m
B.100-6730330.0		1967	KIOSK	ONT	CAN	46.10	78.30	335	S	1.06	80	60.4	
B.100-6730340.0		1967	PANCAKE RIVER	ONT	CAN	47.02	84.38	335	S		74	28.0	
B.100-6730350.0		1967	PANCAKE RIVER	ONT	CAN	47.02	84.38	335	S		84	76.0	
B.100-6730360.0		1967	PANCAKE RIVER	ONT	CAN	47.02	84.38	335	S		74	78.0	
B.100-6730370.0		1967	PANCAKE RIVER	ONT	CAN	47.02	84.38	335	S		74	77.0	
B.100-6730380.0		1967	PANCAKE RIVER	ONT	CAN	47.02	84.38	335	S		74	62.0	
B.100-6730450.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.28	210	S	.75	82	41.5	26cm;17m;107-110w
B.100-6731920.0		1967	SAULT STE. MARIE	ONT	CAN	46.31	84.20		N/A	.88	84	47.0	
B.100-6820230.0		1968	GASPE PENINSULA	QUE	CAN	49.13	65.27	90	S		74	53.0	13cm;9m
B.100-7030820.0		1970	PEMBROKE	ONT	CAN	46.00	77.25		S		84	86.0	
B.100-7030830.0		1970	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25		S		**		
B.100-7030840.0		1970	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26		S		84	31.0	
B.100-7030850.0		1970	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25		S		84	52.0	
B.100-7030860.0		1970	PEMBROKE	ONT	CAN	45.49	77.07		S		84	9.0	
B.100-7030870.0		1970	PEMBROKE	ONT	CAN	45.49	77.07		N/A	1.64	84	23.0	
B.100-7030880.0		1970	PEMBROKE	ONT	CAN	45.49	77.07		S		**		
B.100-7030890.0		1970	PEMBROKE	ONT	CAN	45.49	77.07		S		84	23.0	
B.100-7030900.0		1970	ALGONQUIN PARK	ONT	CAN	45.45	79.00		S	.94	84	66.0	SAND LK RD
B.100-7030910.0		1970	ALGONQUIN PARK	ONT	CAN	45.45	79.00		S	.94	84	74.0	SAND LK RD
B.100-7030920.0		1970	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	150	S		74	79.0	
B.100-7030930.0		1970	E. OF ALGONQUIN PK GATE	ONT	CAN	45.33	78.12		S		**		
B.100-7030940.0		1970	NEAR ALGONQUIN PARK	ONT	CAN	45.33	78.12		S		**		
B.100-7030960.0		1970	CENTRAL RESEARCH FOREST	ONT	CAN	45.24	75.33	70	S	1.43	84	91.0	
B.100-7033170.0		1970	ALGONQUIN PARK	ONT	CAN				N/A	1.47	84	85.0	
B.100-7130940.0		1971	E. OF ALGONQUIN PK GATE	ONT	CAN	45.33	78.12		N/A		**		
B.100-7434390.0		1971	PET. FOR. EXP. STATION	ONT	CAN				S	.92	84	82.0	
B.100-7434400.0		1974	PET. FOR. EXP. STATION	ONT	CAN				S	1.13	84	85.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
B.100-7434510.0		1974	PET. FOR. EXP. STATION	ONT	CAN				S		**		
B.100-7434520.0		1974	PET. FOR. EXP. STATION	ONT	CAN				S		84	83.0	
B.100-7434530.0		1974	PET. FOR. EXP. STATION	ONT	CAN				S	1.35	84	78.0	
B.100-7434540.0		1974	PET. FOR. EXP. STATION	ONT	CAN				S	1.38	84	34.0	
B.100-7434550.0		1974	WHITNEY	ONT	CAN	45.25	78.16	460	S	1.00	84	69.0	51cm;17m
B.100-7434560.0		1974	WHITNEY	ONT	CAN	45.25	78.16	460	S		84	68.0	64cm;18m
B.100-7434740.0		1974	WHITNEY	ONT	CAN	45.25	78.16	460	S	1.07	84	73.0	56cm;17m
B.100-7434910.0		1974	WHITNEY	ONT	CAN	45.25	78.16	460	S		84	88.0	
B.100-7434920.0		1974	WHITNEY	ONT	CAN	45.25	78.16	460	S	.58	84	17.0	
(B.300) BETULA OCCIDENTALIS [water (black) birch]													
B.300-7474240.0		1974	HEDLEY	BC	CAN	49.15	120.00	460	S	.32	79	73.5	8cm;5m
(B.500) BETULA PAPYRIFERA [white (paper) birch]													
B.500-6430350.0	S 123-64	1964	P.F.E.S. ORANGE ROAD	ONT	CAN	45.57	77.25		N/A		**		
B.500-6630540.0		1966	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	150	S	.28	70		
B.500-6731940.0		1967	P.F.E.S. RACE HORSE RD.	ONT	CAN	45.55	77.27		N/A		**		
B.500-6731950.0		1967	P.F.E.S. RACE HORSE RD.	ONT	CAN	45.55	77.27		N/A		**		
B.500-6731960.0		1967	P.F.E.S. RACE HORSE RD.	ONT	CAN	45.55	77.27		N/A		**		
B.500-6830170.0		1968	ONTARIO	ONT	CAN				N/A		**		
B.500-7031060.0		1970	ALGONQUIN PARK	ONT	CAN	45.52	77.33	210	N/A	.35	70		
B.500-7031700.0		1970	ALGONQUIN PARK	ONT	CAN	45.52	77.33	210	S		70	66.0	
B.500-7520360.0		1975	MONT ALBERT, GASPE	QUE	CAN	48.56	66.06	365	S		**		18cm;12m;50w
B.500-7520370.0		1975	MONT ALBERT, GASPE	QUE	CAN	48.56	66.06	365	S		**		20cm;17m;50w
B.500-7520380.0		1975	MONT ALBERT, GASPE	QUE	CAN	48.56	66.06	365	S		**		30cm;12m;50w
B.500-7520400.0		1975	MONT ALBERT, GASPE	QUE	CAN	48.56	66.06	365	S		**		20cm;12m;70w
B.500-7520410.0		1975	PARC DE LA VERENDRYE	QUE	CAN	46.49	76.08	335	S		**		
B.500-7520420.0		1975	PARC DE LA VERENDRYE	QUE	CAN	46.49	76.08	335	S		**		27cm;15m
B.500-7520430.0		1975	PARC DE LA VERENDRYE	QUE	CAN	46.49	76.08	335	S		**		24cm;18m
B.500-7520450.0		1975	PARC DE LA VERENDRYE	QUE	CAN	46.49	76.08	335	S		**		14cm;18m
B.500-7520460.0		1975	PARC DE LA VERENDRYE	QUE	CAN	46.49	76.08	335	S		**		11cm;12m
B.500-7520470.0		1975	PARC DE LA VERENDRYE	QUE	CAN	46.49	76.08	335	S		**		17cm;14m
B.500-7520490.0		1975	PARC DE LA VERENDRYE	QUE	CAN	46.49	76.08	335	S		**		18cm;16m
B.500-7530250.0		1975	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	150	S	.31	79	72.7	30cm;14m
B.500-7540270.0		1975	SANDY LANDS FOR. RESERVE	MAN	CAN	49.20	96.18	370	B(2)		84	46.0	15-18cm;[illegible]-18m
B.500-7540280.0		1975	SANDY LANDS FOR. RESERVE	MAN	CAN	49.20	96.18	370	B(2)	.29	84	13.0	15-18cm;6-18m
B.500-7540290.0		1975	BELAIR FOR. RESERVE	MAN	CAN	50.30	96.25	460	S		**		5-30cm;18m
B.500-7540310.0		1975	AGASSIZ FOR. RESERVE	MAN	CAN	50.00	96.15	460	B(2)	.38	84	72.0	5-25cm;5-15m
B.500-7540320.0		1975	AGASSIZ FOR. RESERVE	MAN	CAN	50.00	96.15	460	B(2)		84	40.0	5-25cm;5-15m
B.500-7571370.0		1975	HOPE	BC	CAN	49.15	121.30	30	S		**		
B.500-7571380.0		1975	HOPE	BC	CAN	49.15	121.30	30	S		**		
B.500-7571390.0		1975	HOPE	BC	CAN	49.15	121.30	30	S		**		
B.500-7571400.0		1975	HOPE	BC	CAN	49.15	121.30	30	S		**		
B.500-7571410.0		1975	HOPE	BC	CAN	49.15	121.30	30	S		**		
B.500-7571420.0		1975	HOPE	BC	CAN	49.15	121.30	30	S		**		
B.500-7731990.0		1977	WIARTON	ONT	CAN	44.47	81.00	180	B(5)		**		10-15cm;5-14m
B.500-7732000.0		1977	RAMSEY LAKE	ONT	CAN	46.30	81.00	250	B	.35	84	80.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
8.500-7771880.0		1977	HOPE	BC	CAN	49.15	121.30	30	B(2)		**		20-46cm;18-24m
8.500-7771890.0		1977	HOPE	BC	CAN	49.15	121.30	30	B(2)		**		20-46cm;18-24m
8.500-7771900.0		1977	HOPE	BC	CAN	49.15	121.30	30	S		**		
8.500-7771930.0		1977	HOPE	BC	CAN	49.15	121.30	30	S		**		
8.500-7771940.0		1977	HOPE	BC	CAN	49.15	121.30	30	S		**		
8.500-8360629.0		1983	FORT MCMURRAY	ALTA	CAN	57.05	111.35	305	N/A	.18	84	31.5	
(8.600) BETULA PENDULA [silver (weeping) birch]													
8.600-8181030.0		1981	KARELSKAYA, ASSR		SUN	65.00	35.00E		B		84	75.0	
8.600-8181040.0		1981	KARELSKAYA, ASSR		SUN	65.00	35.00E		B		84	66.0	
8.600-8181050.0		1981	KARELSKAYA, ASSR		SUN	65.00	35.00E		B		84	75.0	
8.600-8181060.0		1981	KOSTROMSKAYA OBLAST		SUN	57.30	41.00E		B	.18	84	46.0	
(8.700) BETULA POPULIFOLIA (grey birch)													
8.700-7031040.0		1970	OTTAWA	ONT	CAN	45.24	75.33	70	S	.09	84	11.0	
(8.800) BETULA PUBESCENS (downy birch)													
8.800-7683900.0		1976	TARTU REGN (AARDLA)ESTON		SUN	58.22	24.46E	70	B	.21	79	79.8	
(8.900) BETULA VERRUCOSA (European white birch)													
8.900-0080005.0			FRANCE		FRA				N/A	.12	84	30.5	VIA VERSEPUY
8.900-7683890.0		1976	MAHTRA FOREST, ESTONIA		SUN	59.10	24.46E	80	B	.21	79	79.9	
(11.200) CARYA CORDIFORMIS (bitternut hickory)													
11.200-8330014.0		1983	FONTHILL	ONT	CAN	43.02	79.17	190	S	1990.00	**		40cm;10m
(11.250) CARYA GLABRA (pignut hickory)													
11.250-8330012.0		1983	FONTHILL	ONT	CAN	43.02	79.17	190	S	4060.00	**		55cm;18m
(11.300) CARYA LACINIOSA (big shellbark hickory)													
11.300-8330070.0		1983	WEST LINCOLN	ONT	CAN	42.56	79.38		S	3850.00	**		38cm;14m
(11.600) CARYA OVATA (shagbark hickory)													
11.600-8330013.0		1983	FONTHILL	ONT	CAN	43.02	79.17	190	S	3910.00	**		40cm;11m
(12.300) CATALPA SPECIOSA (catalpa)													
12.300-8330639.0		1983	HALDIMAND	ONT	CAN	43.00	79.50		B(10)	17.49	84	76.0	
(15.100) CHAMAECYPARIS LAWSONIANA (Port-Orford-cedar)													
15.100-0080004.0			FRANCE		FRA				N/A	2.78	84	51.0	VIA VERSEPUY

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
(21.100) FRAXINUS AMERICANA (white ash)													
21.100-5630560.0	S2556	1956	WOERMKE RD., P.F.E.S.	ONT	CAN	45.59	77.26		N/A		**		
21.100-7433330.0		1974	CHENAUX	ONT	CAN	45.35	76.41	90	S	54.30	**		15cm,8m
21.100-7433350.0		1974	CHENAUX	ONT	CAN	45.35	76.41	90	S	83.10	**		6cm,5m
21.100-7433370.0		1974	CHENAUX	ONT	CAN	45.35	76.41	90	S	54.50	**		9cm,8m
21.100-7725390.0	S10686	1977	ROUGE RIVER	QUE	CAN	45.51	74.36	180	S		**		
21.100-7725420.0	S10689	1977	ROUGE RIVER	QUE	CAN	45.50	74.36	305	S		**		
21.100-7725440.0	S10691	1977	ROUGE RIVER	QUE	CAN	45.43	74.42	180	S		84	42.7	
21.100-7732550.0	S10402	1977	ROSS TWP.	ONT	CAN	45.35	76.41	110	S		**		
21.100-7732680.0	S10415	1977	RAMSAY TWP.	ONT	CAN	45.10	76.17	150			**		
21.100-7732710.0	S10418	1977	CARP RIDGE	ONT	CAN	45.22	76.02	120	S		**		
21.100-7732730.0	S10420	1977	CARP RIDGE	ONT	CAN	45.22	76.02	120	S		**		
21.100-7732750.0	S10422	1977	CORNWALL TWP.	ONT	CAN	45.09	74.51	90	S		**		
21.100-7732790.0	S10426	1977	KILLBEAR PROV. PARK	ONT	CAN	45.21	80.12	180	S		**		18m
21.100-7732800.0	S10427	1977	KILLBEAR PROV. PARK	ONT	CAN	45.21	80.12	180	S		**		
21.100-7732830.0	S10430	1977	KILLBEAR PROV. PARK	ONT	CAN	45.21	80.12	180	S		**		
21.100-7732860.0	S10433	1977	HARVEY TWP.	ONT	CAN	44.40	78.21	300	S		**		
21.100-7732880.0	S10435	1977	HARVEY TWP.	ONT	CAN	44.40	78.21	300	S		**		
21.100-7732890.0	S10436	1977	RONDEAU PROV. PARK	ONT	CAN	42.18	81.51	170	S		**		
21.100-7732900.0	S10437	1977	RONDEAU PROV. PARK	ONT	CAN	42.18	81.51	170	S		**		
21.100-7732920.0	S10439	1977	RONDEAU PROV. PARK	ONT	CAN	42.18	81.51	170	S		84	38.6	
21.100-7733080.0	S10455	1977	BURFORD TWP.	ONT	CAN	42.59	80.38	240	S		**		
21.100-7733100.0	S10457	1977	WINDHAM TWP.	ONT	CAN	42.58	80.28	260	S		**		
21.100-7733110.0	S10458	1977	WINDHAM TWP.	ONT	CAN	42.56	80.26	230	S		**		
21.100-7733120.0	S10459	1977	WINDHAM TWP.	ONT	CAN	42.53	80.22	230	S		**		
21.100-7733130.0	S10460	1977	WOODHOUSE TWP.	ONT	CAN	42.49	80.16	200	S		**		
21.100-7733160.0	S10463	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.16	79.04	75	S		**		
21.100-7733170.0	S10464	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.16	79.04	75	S		84	32.0	
21.100-7733180.0	S10465	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.16	79.04	75	S		84	22.7	
21.100-7733190.0	S10466	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.16	79.04	75	S		**		
21.100-7733200.0	S10467	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.16	79.04	75	S		**		
21.100-7733210.0	S10468	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.16	79.04	75	S		84	50.7	
21.100-7733220.0	S10469	1977	FORT ERIE	ONT	CAN	42.50	78.50	170	S		84	14.7	
21.100-7733230.0	S10470	1977	BEVERLY TWP.	ONT	CAN	43.20	80.05	275	S		**		
21.100-7733260.0	S10473	1977	BLENHEIM TWP.	ONT	CAN	43.18	80.35	300	S		**		
21.100-7733290.0	S10476	1977	TURNBERRY TWP.	ONT	CAN	43.55	81.19	300	S		**		
21.100-7733300.0	S10477	1977	TURNBERRY TWP.	ONT	CAN	43.55	81.19	300	S		84	52.0	
21.100-7733330.0	S10480	1977	TURNBERRY TWP.	ONT	CAN	43.55	81.19	300	S		84	61.3	
21.100-7733350.0	S10482	1977	TURNBERRY TWP.	ONT	CAN	43.55	81.19	300	S		**		
21.100-7733360.0	S10483	1977	DUNGANNON	ONT	CAN	43.52	81.35	244	S	53.14	84	28.0	
21.100-7733370.0	S10484	1977	DUNGANNON	ONT	CAN	43.52	81.35	244	S		**		
21.100-7733380.0	S10485	1977	DUNGANNON	ONT	CAN	43.52	81.35	244	S		84	54.7	
21.100-7733390.0	S10486	1977	BENMILLER	ONT	CAN	43.36	81.37	244	S		**		
21.100-7733410.0	S10488	1977	BENMILLER	ONT	CAN	43.34	81.36	244	S		**		
21.100-7733420.0	S10489	1977	TARA	ONT	CAN	44.26	81.12	244	S		84	62.7	
21.100-7733430.0	S10490	1977	TARA	ONT	CAN	44.26	81.12	244	S		84	46.7	
21.100-7733450.0	S10492	1977	TARA	ONT	CAN	44.26	81.12	244	S		84	37.3	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
21.100-7733510.0	S10498	1977	BOGNOR	ONT	CAN	44.31	80.45	244	S		**		
21.100-7733520.0	S10499	1977	COLDWATER	ONT	CAN	44.42	79.38	213	S		**		
21.100-7733550.0	S20502	1977	BLUEWATER BEACH	ONT	CAN	44.37	79.58	213	S		**		
21.100-7733560.0	S10503	1977	BLUEWATER BEACH	ONT	CAN	44.37	79.58	213	S		**		
21.100-7733570.0	S10504	1977	BLUEWATER BEACH	ONT	CAN	44.37	79.58	213	S		**		
21.100-7733580.0	S10505	1977	BLUEWATER BEACH	ONT	CAN	44.37	79.58	213	S		**		
21.100-7733590.0	S10506	1977	BLUEWATER BEACH	ONT	CAN	44.37	79.58	213	S		**		
21.100-7733600.0	S10507	1977	TERRA NOVA	ONT	CAN	44.14	80.03	274	S	52.86	84	18.7	
21.100-7733630.0	S10510	1977	TERRA NOVA	ONT	CAN	44.14	80.03	274	S		**		
21.100-7733650.0	S10512	1977	TERRA NOVA	ONT	CAN	44.14	80.03	274	S		**		
21.100-7733670.0	S10514	1977	TERRA NOVA	ONT	CAN	44.14	80.03	274	S		**		
21.100-7733680.0	S10515	1977	STOUFFVILLE	ONT	CAN	44.03	79.16	335	S		**		
21.100-7733690.0	S10516	1977	STOUFFVILLE	ONT	CAN	43.59	79.15	305	S		**		
21.100-7733700.0	S10517	1977	STOUFFVILLE	ONT	CAN	43.58	78.55	213	S		**		
21.100-7733720.0	S10519	1977	STOUFFVILLE	ONT	CAN	44.01	79.09	305	S		**		
21.100-7733730.0	S10520	1977	STOUFFVILLE	ONT	CAN	44.01	79.09	305	S		**		
21.100-7733760.0	S10523	1977	SIBBALT	ONT	CAN	44.17	79.22	213	S		**		
21.100-7733770.0	S10524	1977	SIBBALT	ONT	CAN	44.17	79.14	213	S		**		
21.100-7733780.0	S10525	1977	SIBBALT	ONT	CAN	44.17	79.14	213	S		**		
21.100-7733790.0	S10526	1977	ELIZABETHVILLE	ONT	CAN	44.03	78.28	213	S		84	32.0	
21.100-7733800.0	S10527	1977	ELIZABETHVILLE	ONT	CAN	44.03	78.28	213	S		**		
21.100-7733820.0	S10529	1977	ELIZABETHVILLE	ONT	CAN	44.01	78.26	152	S		**		
21.100-7733830.0	S10530	1977	ELIZABETHVILLE	ONT	CAN	44.00	78.25	213	S		**		
21.100-7733840.0	S10531	1977	ELIZABETHVILLE	ONT	CAN	43.59	78.21	91	S		**		
21.100-7733850.0	S10532	1977	RICE LAKE	ONT	CAN	44.14	78.08	213	S		**		
21.100-7733860.0	S10533	1977	RICE LAKE	ONT	CAN	44.14	78.08	213	S		**		
21.100-7733870.0	S10534	1977	RICE LAKE	ONT	CAN	44.15	78.06	213	S		**		
21.100-7733880.0	S10535	1977	RICE LAKE	ONT	CAN	44.15	78.06	213	S		**		
21.100-7733890.0	S10536	1977	RICE LAKE	ONT	CAN	44.16	78.05	213	S		**		
21.100-7733940.0	S10541	1977	CHALK RIVER	ONT	CAN	45.59	77.26	183	S		**		
21.100-7733950.0	S10542	1977	CHALK RIVER	ONT	CAN	45.59	77.26	183	S		**		
21.100-7735950.0	S10693	1977	CUMBERLAND	ONT	CAN	45.31	75.23	30	S		**		
21.100-7735960.0	S10694	1977	CUMBERLAND	ONT	CAN	45.31	75.23	30	S		**		
21.100-7735970.0	S10695	1977	CUMBERLAND	ONT	CAN	45.31	75.23	30	S		**		
21.100-7735980.0	S10696	1977	CUMBERLAND	ONT	CAN	45.31	75.23	30	S		**		

(21.500) FRAXINUS PENNSYLVANICA (red ash)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
21.500-7733960.0	S10543	1977	ROSS TWP.	ONT	CAN	45.41	76.43	90	S	34.97	84	21.0	5m
21.500-7733970.0	S10544	1977	OSGOODE TWP.	ONT	CAN	45.13	75.34	90	S		**		
21.500-7733980.0	S10545	1977	OSGOODE TWP.	ONT	CAN	45.13	75.34	90	S	38.66	84	10.7	
21.500-7733990.0	S10546	1977	OSGOODE TWP.	ONT	CAN	45.13	75.34	90	S	47.26	84	56.0	
21.500-7734000.0	S10547	1977	OSGOODE TWP.	ONT	CAN	45.13	75.34	90	S		**		
21.500-7734010.0	S10548	1977	OSGOODE TWP.	ONT	CAN	45.13	75.34	90	S	47.32	84	51.0	
21.500-7734020.0	S10549	1977	DRUMMOND TWP.	ONT	CAN	44.58	76.20	150	S		84	68.0	
21.500-7734030.0	S10550	1977	DRUMMOND TWP.	ONT	CAN	44.58	76.20	150	S	41.18	84	38.7	
21.500-7734040.0	S10551	1977	DRUMMOND TWP.	ONT	CAN	44.58	76.20	150	S	49.38	84	62.0	
21.500-7734050.0	S10552	1977	DRUMMOND TWP.	ONT	CAN	44.58	76.20	150	S	35.56	84	57.0	
21.500-7734060.0	S10553	1977	DRUMMOND TWP.	ONT	CAN	44.58	76.20	150	S		**		

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
21.500-7734070.0	S10554	1977	ROXBOROUGH TWP.	ONT	CAN	45.12	74.55	90	S	56.67	84	61.3	17m
21.500-7734080.0	S10555	1977	ROXBOROUGH TWP.	ONT	CAN	45.12	74.55	90	S		**		
21.500-7734090.0	S10556	1977	ROXBOROUGH TWP.	ONT	CAN	45.12	74.55	90	S		84	64.0	
21.500-7734100.0	S10557	1977	ROXBOROUGH TWP.	ONT	CAN	45.12	74.55	90	S		**		
21.500-7734120.0	S10559	1977	WILLIAMSBURG TWP.	ONT	CAN	44.50	75.11	80	S		**		12m
21.500-7734140.0	S10561	1977	WILLIAMSBURG TWP.	ONT	CAN	44.50	75.11	80	S		**		
21.500-7734150.0	S10562	1977	WILLIAMSBURG TWP.	ONT	CAN	44.50	75.11	80	S	37.52	84	32.0	
21.500-7734160.0	S10563	1977	WILLIAMSBURG TWP.	ONT	CAN	44.50	75.11	80	S		84	90.6	
21.500-7734210.0	S10568	1977	OXFORD TWP.	ONT	CAN	44.52	75.40	90	S		**		
21.500-7734220.0	S10569	1977	SOPERTON	ONT	CAN	44.37	76.03	90	S		**		18m
21.500-7734230.0	S10570	1977	SOPERTON	ONT	CAN	44.37	76.03	90	S		**		
21.500-7734240.0	S10571	1977	SOPERTON	ONT	CAN	44.37	76.03	90	S		**		
21.500-7734250.0	S10572	1977	SOPERTON	ONT	CAN	44.37	76.03	90	S		**		
21.500-7734270.0	S10574	1977	ERNESTOWN TWP.	ONT	CAN	44.10	76.48	80	S		**		
21.500-7734280.0	S10575	1977	ERNESTOWN TWP.	ONT	CAN	44.10	76.48	80	S	27.70	84	38.7	
21.500-7734290.0	S10576	1977	ERNESTOWN TWP.	ONT	CAN	44.10	76.48	80	S		84	73.3	
21.500-7734310.0	S10578	1977	ERNESTOWN TWP.	ONT	CAN	44.10	76.48	80	S		**		
21.500-7734350.0	S10582	1977	AMELIASBURGH TWP.	ONT	CAN	44.05	77.16	80	S		**		
21.500-7734360.0	S10583	1977	AMELIASBURGH TWP.	ONT	CAN	44.05	77.16	80	S		**		
21.500-7734390.0	S10586	1977	ELZEVIR TWP.	ONT	CAN	44.34	77.16	150	S		**		
21.500-7734400.0	S10587	1977	ELZEVIR TWP.	ONT	CAN	44.34	77.16	150	S		**		
21.500-7734410.0	S10588	1977	ELZEVIR TWP.	ONT	CAN	44.34	77.16	150	S		**		
21.500-7734420.0	S10589	1977	KILLBEAR PROV. PARK	ONT	CAN	45.21	80.12	180	S		**		18m
21.500-7734430.0	S10590	1977	KILLBEAR PROV. PARK	ONT	CAN	45.21	80.12	180	S		**		
21.500-7734440.0	S10591	1977	KILLBEAR PROV. PARK	ONT	CAN	45.21	80.12	180	S		**		
21.500-7734450.0	S10592	1977	KILLBEAR PROV. PARK	ONT	CAN	45.21	80.12	180	S		**		
21.500-7734470.0	S10594	1977	RONDEAU PROV. PARK	ONT	CAN	42.07	81.51	180	S		84	73.3	
21.500-7734480.0	S10595	1977	RONDEAU PROV. PARK	ONT	CAN	42.07	81.51	180	S	24.53	84	60.0	
21.500-7734490.0	S10596	1977	RONDEAU PROV. PARK	ONT	CAN	42.07	81.51	180	S		84	44.0	
21.500-7734510.0	S10598	1977	CAIRO	ONT	CAN	42.44	81.54	210	S		**		
21.500-7734520.0	S10599	1977	KINGSCOURT	ONT	CAN	42.56	81.57	210	S		**		
21.500-7734530.0	S10600	1977	KINGSCOURT	ONT	CAN	42.56	81.57	210	S		**		
21.500-7734560.0	S10603	1977	KINGSCOURT	ONT	CAN	42.56	81.57	210	S		**		
21.500-7734580.0	S10605	1977	BLENHEIM	ONT	CAN	42.19	81.57	180	S		**		
21.500-7734600.0	S10607	1977	PORT BURWELL	ONT	CAN	42.41	80.49	210	S		**		
21.500-7734610.0	S10608	1977	PORT BURWELL	ONT	CAN	42.41	80.49	210	S		**		
21.500-7734620.0	S10609	1977	PORT BURWELL	ONT	CAN	42.41	80.49	210	S		**		
21.500-7734660.0	S10613	1977	NORWICH	ONT	CAN	42.59	80.33	213	S		**		
21.500-7734680.0	S10615	1977	NORWICH	ONT	CAN	42.59	80.33	213	S		**		
21.500-7734720.0	S10619	1977	PORT DOVER	ONT	CAN	42.51	80.10	213	S		**		
21.500-7734730.0	S10620	1977	PORT DOVER	ONT	CAN	42.51	80.10	213	S	39.08	84	54.0	
21.500-7734750.0	S10622	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.14	79.10	76	S		**		
21.500-7734760.0	S10623	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.14	79.10	76	S		**		
21.500-7734780.0	S10625	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.14	79.10	76	S		**		
21.500-7734790.0	S10626	1977	NIAGARA-ON-THE-LAKE	ONT	CAN	43.14	79.10	76	S	34.08	84	44.0	
21.500-7734820.0	S10629	1977	WAINFLEET, NEWARK PARK	ONT	CAN	42.56	79.23		S		**		
21.500-7734830.0	S10630	1977	WAINFLEET, NEWARK PARK	ONT	CAN	42.56	79.23		S		84	57.3	
21.500-7734840.0	S10631	1977	WAINFLEET, NEWARK PARK	ONT	CAN	42.56	79.23		S		**		
21.500-7734880.0	S10635	1977	WESTOVER	ONT	CAN	43.20	80.05	244	S	26.07	84	68.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
21.500-7734890.0	S10636	1977	WESTOVER	ONT	CAN	43.20	80.05	244	S		**		
21.500-7734900.0	S10637	1977	WASHINGTON	ONT	CAN	43.17	80.34	244	S		**		
21.500-7734910.0	S10638	1977	WASHINGTON	ONT	CAN	43.17	80.34	244	S		**		
21.500-7734920.0	S10639	1977	WASHINGTON	ONT	CAN	43.17	80.34	244	S		**		
21.500-7734950.0	S10642	1977	WINGHAM	ONT	CAN	43.55	81.23	305	S		**		
21.500-7734980.0	S10645	1977	WINGHAM	ONT	CAN	43.55	81.23	305	S		**		
21.500-7735010.0	S10648	1977	BOGNOR	ONT	CAN	44.31	80.47	244	S		**		
21.500-7735020.0	S10649	1977	BOGNOR	ONT	CAN	44.31	80.47	244	S		**		
21.500-7735030.0	S10650	1977	MEAFORD	ONT	CAN	44.35	80.31	183	S		**		
21.500-7735040.0	S10651	1977	MEAFORD	ONT	CAN	44.35	80.31	183	S		**		
21.500-7735050.0	S10652	1977	MEAFORD	ONT	CAN	44.35	80.31	183	S		**		
21.500-7735060.0	S10653	1977	MEAFORD	ONT	CAN	44.35	80.31	183	S		84	74.7	
21.500-7735070.0	S10654	1977	MEAFORD	ONT	CAN	44.35	80.31	183	S		**		
21.500-7735080.0	S10655	1977	COLDWATER	ONT	CAN	44.43	79.37	183	S		**		
21.500-7735090.0	S10656	1977	COLDWATER	ONT	CAN	44.43	79.37	183	S		**		
21.500-7735100.0	S10657	1977	COLDWATER	ONT	CAN	44.43	79.37	183	S		**		
21.500-7735110.0	S10658	1977	COLDWATER	ONT	CAN	44.43	79.37	183	S		**		
21.500-7735120.0	S10659	1977	COLDWATER	ONT	CAN	44.43	79.37	183	S		**		
21.500-7735140.0	S10661	1977	TINY MARSH	ONT	CAN	44.36	79.56	213	S		84	64.0	
21.500-7735170.0	S10664	1977	TINY MARSH	ONT	CAN	44.36	79.56	213	S		84	65.3	
21.500-7735190.0	S10666	1977	STOUFFVILLE	ONT	CAN	43.57	79.14	213	S		**		
21.500-7735200.0	S10667	1977	STOUFFVILLE	ONT	CAN	43.57	79.14	213	S		**		
21.500-7735210.0	S10668	1977	STOUFFVILLE	ONT	CAN	43.57	79.14	213	S		**		
21.500-7735220.0	S10669	1977	GAMEBRIDGE	ONT	CAN	44.31	79.10	213	S		**		
21.500-7735230.0	S10670	1977	GAMEBRIDGE	ONT	CAN	44.31	79.10	213	S		**		
21.500-7735270.0	S10674	1977	CANTON	ONT	CAN	43.59	78.21	152	S		**		
21.500-7735280.0	S10675	1977	CANTON	ONT	CAN	43.59	78.21	152	S		**		
21.500-7736000.0	S10698	1977	CUMBERLAND	ONT	CAN	45.31	75.25	91	S		**		
21.500-7736010.0	S10699	1977	CUMBERLAND	ONT	CAN	45.31	75.25	91	S		**		
21.500-7736030.0	S10701	1977	CUMBERLAND	ONT	CAN	45.31	75.25	91	S		**		
21.500-7736040.0	S10702	1977	CUMBERLAND	ONT	CAN	45.31	75.25	91	S		**		
21.500-8330071.0		1983	CITY OF THOROLD	ONT	CAN	43.07	79.22		S		84	51.0	26cm;18m

(23.400) GLEDITSIA TRIACANTHOS (honey-locust)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
23.400-7237420.0		1972	UPLANDS AIRPORT,OTTAWA	ONT	CAN	45.20	75.39	100	S		84	46.0	

(27.400) KOELREUTERIA PANICULATA (golden rain tree)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
27.400-8330021.0		1983	VINELAND - AGR. CANADA	ONT	CAN	43.09	79.23	90	S	158.32	83	13.0	25cm;6m

(28.100) LARIX DECIDUA (European larch)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
28.100-6781670.0		1967	JAGERSBORG		DNK	55.45	12.30E		R	5.69	76	38.0	
28.100-7286160.0		1972	SARINOV		CSK	49.05	20.40E	650	R	4.41	78	52.0	
28.100-7485230.0		1974	FARUM, RAVNSHOLT		DNK	55.49	12.23E		B	6.81	78	36.0	IMPROVED ALPS
28.100-7485240.0	S 9462	1974	JAGERSBORG		DNK	55.45	12.30E		B	6.92	76	18.0	IMPROVED SUDETAN
28.100-7584720.0		1975	POV BYSTRICA		CSK	49.07	18.26E	500	R	5.24	83	21.0	
28.100-7687590.0		1976	HNUSTA		CSK	48.42	19.57E	800	R	4.44	83	26.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
28.100-7687600.0		1976	LUCENEC		CSK	48.29	19.38E	500	R	5.45	83	9.0	
28.100-7789170.0	S 9989	1977	MIEDZYLESIE FOR INSP		POL	50.15	16.30E	500	R	6.20	83	20.0	
28.100-7886660.0		1978	RAJEC		CSK	49.25	16.39E	550	R	5.07	**	53.0	
28.100-7886670.0		1978	NIZNY, SLAVKOV		CSK	48.43	20.55E	550	B	4.69	**	50.0	
28.100-7886680.0		1978	LIPANY		CSK	50.02	14.55E	600	R	4.34	**	61.0	
28.100-7886760.0		1978	FOR DIST BYSTIZYCA		POL	50.16	16.37E	500	R(10)	4.50	83	18.0	
28.100-7983980.0		1979	CHOCEN		CSK	50.00	16.18E	280	R	5.86	79	41.0	
28.100-7983990.0		1979	RUDA		CSK	50.00	16.54E	550	B	5.74	79	37.0	
(28.150) LARIX DECIDUA var. POLONICA													
28.150-7789330.0		1977	FOR DIST SKAVIYSKO		POL	51.05	20.00E	300	R		**		
(28.200) LARIX EUROLEPIS (Dunkeld larch)													
28.200-7285630.0	S 9980	1972	HOLBAK		DNK	56.33	10.19E		CP	2.66	84	18.0	IMP. JAP. X ALPS
28.200-7485270.0		1974	JAP. BUCKEBURG		DEU	52.50	9.00E		B	5.11	75	50.0	MOSTLY HYBRIDS
28.200-7485290.0		1974	FAREFOLDEN		DNK	56.28	8.17E		CP	8.25	84	19.0	ALPS. X JAP.
28.200-7485320.0		1974	KLOSTERHEDEN		DNK	56.30	8.20E		B	7.72	84	6.0	COMP. 512
28.200-7687880.0		1976	TARTU, ESTONIAN SSR		SUN	58.23	26.49E		R	7.60	83	31.0	
(28.300) LARIX GMELINI (Dahurian larch)													
28.300-7195500.0	S 9963	1971	HEILUNG-KIANG PROV.		CHN	47.00	129.00E		R		83	86.5	
28.300-7687900.0		1976	TARTU, ESTONIAN SSR		SUN	58.23	26.49E		B	5.88	84	42.6	L. LUBARSKII
28.300-8081120.0		1980	KIRIN PROVINCE		CHN	44.00	126.00E		B		84	58.0	
28.300-8081830.0		1980	YAKUTSKAYA, ASSR		SUN	62.00	13.00E		R	3.08	84	47.0	
(28.320) LARIX GMELINI var. JAPONICA													
28.320-7687870.0		1976	TARTU, ESTONIAN SSR		SUN	58.23	26.49E		B		**		L. KURILENSIS
(28.350) LARIX GMELINI var. OLGENSIS													
28.350-8081130.0		1980	KIRIN PROVINCE		CHN	44.00	126.00E		R	5.00	83	57.0	
28.350-8180860.0		1981	KIRIN PROVINCE		CHN	44.00	126.00E		B	4.50	83	54.0	
(28.370) LARIX GMELINI var. PRINCIPIS													
28.370-7886970.0		1978	DA-TUNG,SAN-SHI PROV		CHN	31.00	118.00E		B	5.09	84	26.0	
28.370-7983330.0		1979	SHENSI		CHN	36.00	110.00E		B		84	42.0	
(28.400) LARIX LARICINA (tamarack; eastern larch)													
28.400-6730210.0	S 8529	1967	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.26	180	N/A	1.53	76	97.5	
28.400-6800180.0	S 8530	1968	NORTH POND	NFLD	CAN	48.50	54.44		R	1.91	76	25.0	
28.400-7021880.0	S 8531	1970	BERTHIER DIVISION	QUE	CAN	46.15	73.15		B	2.00	76	76.4	
28.400-7021890.0	S 8532	1970	LA MALBAIE	QUE	CAN	47.40	70.20		R	2.11	76	70.0	
28.400-7021900.0	S 8533	1970	PREISSAC	QUE	CAN	48.30	78.15		R	2.18	76	81.5	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
28.400-7021910.0	S 8534	1970	LAKE LORTIE	QUE	CAN	47.40	74.15		R	1.93	76	64.5	
28.400-7021920.0	S 8535	1970	RADNOR	QUE	CAN	46.45	72.50		R	2.40	76	93.5	
28.400-7021930.0	S 8536	1970	LAKE CHERTSEY	QUE	CAN	46.11	73.52		R	2.05	76	74.0	
28.400-7021940.0	S 8537	1970	GUERIN	QUE	CAN	47.45	79.20		R	2.10	76	89.0	
28.400-7021950.0	S 8538	1970	CARAND	QUE	CAN	47.39	68.57	170	R	1.93	76	40.5	
28.400-7021960.0	S 8539	1970	TRECESSON	QUE	CAN	48.35	78.20		R	2.10	76	86.0	
28.400-7021970.0	S 8540	1970	LANGERIN	QUE	CAN	46.21	70.22		R	2.28	76	59.0	
28.400-7021980.0	S 8541	1970	ROBERVAL	QUE	CAN	48.30	72.15		B	2.36	76	75.5	
28.400-7031510.0	S 7174	1970	BISSETT CREEK	ONT	CAN	46.13	78.01	171	S	2.35	76	99.0	
28.400-7031520.0	S 7815	1970	BISSETT CREEK	ONT	CAN	46.13	78.01	171	S	2.33	76	89.0	
28.400-7031530.0		1970	BISSETT CREEK	ONT	CAN	46.13	78.01	171	S	2.53	76	92.0	
28.400-7031540.0	S 7175	1970	BISSETT CREEK	ONT	CAN	46.13	78.01	171	S	2.83	76	97.0	
28.400-7031550.0	S 7176	1970	BISSETT CREEK	ONT	CAN	46.13	78.01	171	S	2.05	76	99.5	
28.400-7031560.0	S 7183	1970	SUPPLE LAKE	ONT	CAN	45.49	77.18	187	S	2.26	76	99.5	25cm,15m,22y
28.400-7031570.0	S 7816	1970	SUPPLE LAKE	ONT	CAN	45.49	77.18	187	S	2.22	76	94.5	23cm,16m,25y
28.400-7031580.0	S 7817	1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	168	S	1.91	76	90.5	
28.400-7031590.0	S 7818	1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	168	S	2.07	76	92.0	
28.400-7031610.0	S 7819	1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	168	S	2.47	76	96.0	
28.400-7031620.0	S 7820	1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	168	S	2.47	76	97.5	
28.400-7031630.0	S 7837	1970	SUPPLE LAKE	ONT	CAN	45.49	77.18	187	S	1.66	76	96.5	34cm,19m,32y
28.400-7151860.0	S 8542	1971	MEADOW LAKE	SASK	CAN	53.50	108.40	640	B(9)	1.78	76	85.5	15-18m,40-50y
28.400-7831590.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	N/A		**		
28.400-7930150.0	S 9520	1979	BOBCAYGEON ROAD	ONT	CAN	45.00	78.46	480	S	2.10	83	88.0	23cm,15m
28.400-7930170.0	S 9522	1979	BOBCAYGEON ROAD	ONT	CAN	45.00	78.46	480	S	2.10	83	80.0	25cm,20m
28.400-7930210.0	S 9526	1979	DYSART TWP.	ONT	CAN	45.01	78.27	450	S		**		
28.400-7930220.0	S 9527	1979	HAGARTY TWP.	ONT	CAN	45.34	77.24	175	S		**		
28.400-7930270.0	S 9635	1979	FINCH TWP.	ONT	CAN	45.12	75.04	80	B	2.50	83	55.0	PLANT'N,3-9m,10y
28.400-7930290.0	S 9637	1979	ROBERTSON LAKE	ONT	CAN	45.12	76.36	275	B	2.80	83	84.0	6-31cm,5-16m,9-27y
28.400-7930300.0	S 9638	1979	OXFORD TWP.	ONT	CAN	44.55	75.39	90	B	2.40	83	86.0	9-12m,15-25y
28.400-7930310.0	S 9639	1979	CARLSBAD SPRINGS	ONT	CAN	45.22	75.28		B(25)	2.30	83	84.0	15-20m,25-35y
28.400-7930320.0	S 9640	1979	GLOUCESTER TWP.	ONT	CAN	45.22	75.30		B(15)	2.30	83	60.0	15-22m,30-60y
28.400-7930760.0	S 9641	1979	MURRAY TWP.	ONT	CAN	44.12	77.44	120	B(8)	2.10	83	77.0	14-18m,50-70y
28.400-7930860.0	S 9583	1979	WILLISON TWP.	ONT	CAN	47.52	80.28	300	S		**		
28.400-7931570.0	S 9617	1979	IGNACE TWP.	ONT	CAN	49.25	91.40	450	S	2.00	83	89.0	26cm,20m,60-65y
28.400-7931580.0	S 9618	1979	IGNACE TWP.	ONT	CAN	49.25	91.40	450	S	2.10	83	100.0	18cm,13m,30-33y
28.400-7931590.0	S 9619	1979	IGNACE TWP.	ONT	CAN	49.25	91.40	450	S	1.60	83	97.0	24cm,17m,58-63y
28.400-7931640.0	S 9624	1979	IGNACE TWP.	ONT	CAN	49.25	91.40	450	S	1.80	84	93.0	30cm,20m,59-64y
28.400-8233200.0		1982	CARLETON DISTRICT	ONT	CAN	45.08	76.09		S		**		

(28.500) LARIX LEPTOLEPIS (Japanese larch)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
28.500-6681820.0	S 8901	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.62	77	67.5	TOKACHI DIST.
28.500-6681830.0	S 8902	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.54	77	51.5	TOKACHI DIST.
28.500-6681840.0	S 8903	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.48	77	54.0	TOKACHI DIST.
28.500-6681850.0	S 8904	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.48	77	56.0	TOKACHI DIST.
28.500-6681860.0	S 8905	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.80	77	74.5	TOKACHI DIST.
28.500-6681870.0	S 8906	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.38	77	56.5	TOKACHI DIST.
28.500-6681880.0	S 8907	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.64	77	54.5	TOKACHI DIST.
28.500-6681890.0	S 8908	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.63	77	53.5	TOKACHI DIST.

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
28.500-6681900.0	S 8909	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.36	77	45.5	TOKACHI DIST.
28.500-6681910.0	S 8910	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.35	77	45.5	TOKACHI DIST.
28.500-6681920.0	S 8911	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.57	77	53.0	TOKACHI DIST.
28.500-6681930.0	S 8912	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.48	77	60.5	TOKACHI DIST.
28.500-6681940.0	S 8913	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.64	77	70.0	TOKACHI DIST.
28.500-6681950.0	S 8914	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.69	77	74.0	TOKACHI DIST.
28.500-6681960.0	S 8915	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.34	77	50.5	TOKACHI DIST.
28.500-6681970.0	S 8916	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.42	77	67.0	TOKACHI DIST.
28.500-6681980.0	S 8917	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.48	77	48.0	TOKACHI DIST.
28.500-6681990.0	S 8918	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.62	77	59.5	TOKACHI DIST.
28.500-6682000.0	S 8919	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.36	77	58.0	TOKACHI DIST.
28.500-6682010.0	S 8920	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.00E		N/A	4.67	77	69.5	TOKACHI DIST.
28.500-6682030.0	S 8921	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.38	77	51.5	TOKACHI DIST.
28.500-6682040.0	S 8922	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.46	77	55.5	TOKACHI DIST.
28.500-6682050.0	S 8923	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.38	77	67.0	TOKACHI DIST.
28.500-6682060.0	S 8924	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.54	77	70.5	TOKACHI DIST.
28.500-6682070.0	S 8925	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.61	77	66.0	TOKACHI DIST.
28.500-6682080.0	S 8926	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.61	77	69.0	TOKACHI DIST.
28.500-6682090.0	S 8927	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.81	77	63.5	TOKACHI DIST.
28.500-6682100.0	S 8928	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.52	77	51.5	TOKACHI DIST.
28.500-6682110.0	S 8929	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.46	77	57.5	TOKACHI DIST.
28.500-6682120.0	S 8930	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.32	77	52.0	TOKACHI DIST.
28.500-6682130.0	S 8931	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.38	77	59.5	TOKACHI DIST.
28.500-6682140.0	S 8932	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.50	77	57.0	TOKACHI DIST.
28.500-6682150.0	S 8933	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.44	77	50.0	TOKACHI DIST.
28.500-6682160.0	S 8934	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.37	77	36.5	TOKACHI DIST.
28.500-6682170.0	S 8935	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.42	77	51.0	TOKACHI DIST.
28.500-6682180.0	S 8936	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.53	77	54.0	TOKACHI DIST.
28.500-6682190.0	S 8937	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.62	77	59.0	TOKACHI DIST.
28.500-6682200.0	S 8938	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.75	77	63.0	TOKACHI DIST.
28.500-6682210.0	S 8939	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.63	77	72.5	TOKACHI DIST.
28.500-6682230.0	S 8941	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.48	77	53.5	TOKACHI DIST.
28.500-6682240.0	S 8942	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.60	77	68.0	TOKACHI DIST.
28.500-6682250.0	S 8943	1966	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		N/A	4.66	77	44.0	TOKACHI DIST.
28.500-6980500.0	S 8951	1969	CENTRAL HONSHU		JPN	35.00	136.00E		B	4.15	84	9.5	
28.500-6980510.0	S 8952	1969	HOKKAIDO PREFECTURE		JPN	43.00	141.30E		B	4.27	76	50.2	
28.500-7081670.0	S 8953	1970	NAGANO PREFECTURE		JPN	36.00	138.00E		B	4.37	76	57.5	
28.500-7182050.0	S 8954	1971	GUMMA PREFECTURE		JPN	36.30	139.00E	1600	B	4.04	76	75.0	KUMASHIROYAMA
28.500-7182060.0	S 8955	1971	GUMMA PREFECTURE		JPN	36.30	139.00E	1783	B	3.93	76	72.5	MIZUNOTO
28.500-7182070.0		1971	TOCHIGI PREFECTURE		JPN	36.40	140.00E	1570	B	5.33	76	64.5	YASHUHARA
28.500-7485200.0	S 8956	1974	C.E. FLENSBURG		DEU	54.47	9.27E		N/A	5.51	76	80.0	NO. 615
28.500-7485300.0	S 8958	1974	C.E. FLENSBURG		DEU	54.47	9.27E	300	B	5.42	76	97.8	NO. 601
28.500-7487120.0	S 8959	1974	YAMANASHI PREFECTURE		JPN	35.20	138.43E	2100	B	3.70	77	50.5	
28.500-7487140.0	S 8961	1974	NAGANO PREFECTURE		JPN	36.23	138.22E	2030	B	3.03	77	32.5	
28.500-7687890.0		1976	TARTU, ESTONIAN SSR		SUN	58.23	26.49E		B	6.09	84	20.0	

(28.700) LARIX OCCIDENTALIS (western larch)

28.700-7473050.0		1974	JOHNSTONE CR. PROV. PARK BC		CAN	49.03	119.03	880	B	3.38	76	76.0	18-23m,35-40w

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
(28.750) LARIX POTANINII (Tibetan larch)													
28.750-7886980.0		1978	SHIAO-JIN,SZECHUAN PROV		CHN	30.00	107.00E		N/A	2.72	83	29.0	
28.750-7983340.0		1979	SZECHUAN		CHN	30.00	107.00E		B	2.80	83	29.0	
(28.800) LARIX SIBIRICA (Siberian larch)													
28.800-7155680.0	S 9984	1971	INDIAN HEAD	SASK	CAN	50.31	103.41	590	B	11.18	84	71.0	11-31cm,13-23m,61w
28.800-7687840.0		1976	TARTU, ESTONIAN SSR		SUN	58.23	26.49E		B	14.10	83	25.0	L. SUKACZEWII
28.800-7687850.0		1976	PIIRSALU, ESTONIAN SSR		SUN	59.04	23.53E		R	10.40	83	10.0	L. SUKACZEWII
28.800-7687860.0		1976	KAMBJA, ESTONIAN SSR		SUN	58.10	26.51E		B	11.40	83	24.0	L. SUKACZEWII
28.800-7687910.0		1976	ARZFLILOVSK		SUN	52.40	58.30E	500	B	13.10	83	34.0	L. SUKACZEWII
28.800-7789420.0		1977	IVANOVO OBLAST		SUN	56.30	42.00E		B	10.50	83	32.0	
28.800-7886880.0		1978	BASHKIR, ASSR		SUN	55.00	55.00E		B	13.58	84	44.0	
28.800-7886890.0		1978	BASHKIR, ASSR		SUN	55.00	55.00E		R	10.50	84	19.0	
28.800-8081820.0		1980	KRASNOYARSKY KRAI		SUN	55.00	95.00E		B	8.26	84	70.0	
28.800-8181230.0		1981	IVANOVSKAYA OBLAST		SUN	57.00	42.30E		B	9.38	84	49.0	
(30.400) METASEQUOIA GLYPTOSTROBOIDES (dawn redwood)													
30.400-7886190.0		1978	HUPEH		CHN	30.30	109.00E	1000	N/A	1.66	**		
(32.100) PICEA ABIES (Norway spruce)													
32.100-6730870.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25		B	11.95	83	78.5	
32.100-6730880.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25		B	8.70	83	87.0	
32.100-6731830.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25		N/A	11.24	83	54.6	
32.100-6880270.0		1968	IVANTJARN		SWE	60.48	16.45E	240	B	6.65	83	85.5	
32.100-6880280.0		1968	CENTRAL FINLAND		FIN	62.00	24.00E		B	5.22	83	34.5	
32.100-7383260.0		1973	COSNA FOR DIST.		ROM	27.00	45.00E		R	7.38	83	76.5	
32.100-7383270.0		1973	MOLDOVITA DIST.		ROM	46.50	27.00E		R	7.75	83	72.7	
32.100-7486820.0		1974	PRIENU, LITHUANIAN SSR		SUN	54.12	23.51E	107	S	7.01	83	77.0	49cm,36m,150w
32.100-7486830.0		1974	VILNIAUS, LITHUANIAN SSR		SUN	54.48	25.18E	150	S	6.84	83	61.3	38cm,31m,90w
32.100-7581500.0		1975	TARTU RES FOR ESTONIAN		SUN	58.22	26.46E	60	B	6.25	83	91.0	
32.100-7885990.0		1978	VILJANDI NR.98 ESTONIA		SUN	58.15	25.15E	120	S	7.89	83	79.0	32cm,33m,85w
32.100-7886790.0		1978	LENINGRAD OBLAST		SUN	60.00	31.00E		R	6.16	83	78.0	
32.100-7886800.0		1978	PSKOV OBLAST		SUN	57.00	27.00E		B	6.67	83	67.0	
32.100-7886810.0		1978	ARKHANGEI'SK OBLAST		SUN	68.00	45.00E		R	4.79	83	51.8	
32.100-7886820.0		1978	VOLOGDA OBLAST		SUN	58.00	40.00E		R	5.49	83	71.7	
32.100-7886830.0		1978	KOSTROMA OBLAST		SUN	57.00	42.00E		R	4.94	83	70.3	
32.100-7886840.0		1978	KALININ OBLAST		SUN	57.00	37.00E		R	7.12	83	92.1	
32.100-7886850.0		1978	KALUGA OBLAST		SUN	53.00	36.00E		R	6.46	83	68.8	
32.100-7984100.0		1979	YAROSLAVSKA OBLAST		SUN	57.00	39.00E		R	5.19	83	76.5	
32.100-7984110.0		1979	KOSTROMSKAYA OBLAST		SUN	58.00	41.00E		B	5.03	83	72.0	
32.100-8181010.0		1981	KALUZHKAYA OBLAST		SUN	54.00	35.00E		R	6.04	83	61.5	
(32.150) PICEA ASPERATA (dragon spruce; Chinese spruce)													
32.150-7886950.0		1978	LI-HSIEN,SZECHUAN PROV		CHN	31.40	102.48E	3000	N/A	6.61	84	84.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
(32.200) PICEA BICOLOR													
32.200-7484350.0		1974	YAMANASHI PREFECTURE		JPN	35.25	138.43E	1500	B	8.63	75	71.5	26m,120-150w
(32.290) PICEA BRACHYTYLA var. COMPLANTA													
32.290-7886930.0		1978	WO-BIEN HSIEN,SZECHUAN		CHN	31.00	108.00E	2400	B	3.87	84	38.0	
(32.400) PICEA ENGELMANNII (Engelmann spruce)													
32.400-7161950.0		1971	HIGHWOOD SUMMIT	ALTA	CAN	50.20	114.30	2225	B	1.88	83	40.5	15m
32.400-7186160.0		1971	HUNGRY HORSE	MONT	USA	48.21	113.58	1100	B(15)	2.50	83	32.0	10-25m,150w
32.400-7186170.0		1971	STANLEY	ID	USA	44.18	114.54	1950	B(12)	2.52	**		100rm,35-40m,200w
32.400-7186180.0		1971	LARAMIE MOUNTAINS	WYO	USA	42.29	105.50	2300	B	2.52	**		
32.400-7679130.0		1976	DEWNEY	BC	CAN	49.10	122.12	1509	S		**		
(32.500) PICEA GLAUCA (white spruce)													
32.500-0019460.0	S 8601	1953	DENBIGH	ONT	CAN	45.07	77.28	365	N/A	2.44	78	15.0	
32.500-0024370.0	S 8604	1955	ANGUS	ONT	CAN	44.15	79.55	220	N/A	2.66	83	35.3	
32.500-0024560.0	S 8002	1956	LAKE ST. PATRICK	QUE	CAN	46.18	77.19	304	B	2.05	83	39.4	
32.500-0024590.0	S 8623	1956	ALGONQUIN PARK	ONT	CAN	45.34	78.36	426	S	1.97	83	91.0	
32.500-0024600.0	S 8624	1956	MAYNOOTH	ONT	CAN	45.14	77.56	394	N/A	2.22	83	39.5	
32.500-0024620.0	S 8626	1956	MCNALLY LAKE	QUE	CAN	46.32	76.30	243	N/A	2.12	83	35.0	
32.500-0024660.0	S 8629	1956	MANITOULIN IS.	ONT	CAN	45.50	82.55	205	N/A	2.17	83	51.0	
32.500-0024690.0	S 8632	1956	AYLMER LAKE	QUE	CAN	45.59	71.22	304	S	2.30	83	58.5	
32.500-0024720.0	S 8005	1956	PRICE	QUE	CAN	48.36	68.07	304	S	1.84	83	38.0	
32.500-0024770.0	S 8639	1956	ASHLEY MINES (WIGWAG LK)	ONT	CAN	48.00	81.00	365	S	1.78	83	36.0	
32.500-0024840.0	S 8645	1956	MITCHINAMEKUS L	QUE	CAN	47.23	75.09	396	S	1.77	83	36.0	
32.500-0024850.0	S 8646	1956	LAC SIMARD	QUE	CAN	47.32	78.37	274	S	2.02	83	50.0	
32.500-0025560.0	S 8652		N. SEAL CREEK	MAN	CAN	56.56	92.51	30	S	2.07	83	33.0	
32.500-0026940.0	S 8657	1960	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.21	76	S	2.36	83	65.5	
32.500-0028420.0	S 8658		DAVIE LAKE	BC	CAN	54.32	122.45	688	S	2.05	**		
32.500-0028700.0	S 8661	1959	KAPUSKASING	ONT	CAN	48.55	82.47	259	S	2.08	83	34.8	
32.500-0028950.0	S 8662		GRAND PILES	QUE	CAN	46.45	73.05	365	S	2.23	83	47.0	
32.500-0040650.0	S 8147-2		FORT SMITH	NWT	CAN	60.02	111.58	182	S		**		
32.500-0051930.0	S 8676		WESTMEATH TP.	ONT	CAN	45.50	76.50	121	S	2.05	83	55.0	ST.1601
32.500-0080064.0			PFES, YOUNG CRK RD	ONT	CAN	46.00	77.30		S	1.98	84	30.0	
32.500-5310010.0	S 8693	1953	KLONDYKE ROAD	PEI	CAN	46.25	62.28	60	S	2.46	83	60.1	
32.500-5620220.0	S 8616	1956	CASEY	QUE	CAN	47.53	74.11		N/A	1.65	83	35.5	
32.500-5810010.0	S 8694	1958	GYPSUM MINES	NS	CAN	44.59	64.04	30	N/A	2.10	83	86.0	
32.500-6030480.0	S 98-60	1960	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	N/A	1.90	83	67.5	
32.500-6430340.0	S 119-64	1964	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	N/A		**		
32.500-6530020.0		1965	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.42	**		ST.1757
32.500-6530740.0		1965	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.90	83	41.2	ST.1851
32.500-6530760.0		1965	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.40	83	84.9	ST.1854
32.500-6530790.0		1965	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.24	**		ST.1860
32.500-6531000.0		1965	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.25	83	45.5	ST.1853

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-6630010.0		1966	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	N/A	2.94	83	69.5	
32.500-6630020.0		1966	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	N/A	3.24	83	88.0	ST.1861
32.500-6630820.0		1966	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	3.11	**		ST.1866
32.500-6631040.0		1966	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	3.13	**		ST.1861
32.500-6632390.0	S 127-66	1966	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	.23	84	75.0	
32.500-6730660.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.73	83	53.5	ST.1622
32.500-6730670.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.92	83	53.5	ST.1624
32.500-6730680.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.69	83	89.0	ST.1625
32.500-6730690.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.10	83	96.0	ST.1746
32.500-6730700.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.47	83	46.0	ST.1747
32.500-6730710.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.10	83	68.0	ST.1750
32.500-6730740.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.20	83	67.8	ST.1851
32.500-6730750.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.55	83	79.0	ST.1852
32.500-6730760.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.99	83	80.0	ST.1854
32.500-6730800.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.01	83	63.5	ST.1862
32.500-6730830.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	B	2.19	83	77.5	
32.500-6731000.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.78	83	87.6	ST.1853
32.500-6731020.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.28	83	96.5	ST.1856
32.500-6731030.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.64	83	89.5	ST.1859
32.500-6731050.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.53	83	90.0	ST.1864
32.500-6731060.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	1.53	83	37.0	ST.1865
32.500-6731110.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.44	83	96.5	ST.1756
32.500-6731120.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.56	83	82.5	ST.1757
32.500-6731800.0		1967	SAULT STE MARIE	ONT	CAN	46.31	84.20		N/A	2.10	83	88.5	
32.500-6800190.0	S 8007	1968	GANDER	NFLD	CAN	48.57	54.45	91	B	2.71	83	37.5	
32.500-7000780.0	S 8080	1970	GRAND FALLS	NFLD	CAN	48.55	55.51	106	B	2.76	83	96.5	3-13m,15-48y
32.500-7000790.0	S 8096	1970	GRAND LAKE	NFLD	CAN	48.53	57.36	45	B	3.28	83	94.5	10-25cm,3-8m,15y
32.500-7001180.0	S 8150	1970	GOOSE BAY	NFLD	CAN	53.20	60.25	30	N/A	2.35	**		
32.500-7010750.0	S 8055	1970	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.21	76	N/A		71	96.0	
32.500-7011120.0	S 8119	1970	HARBOUR CENTRE	NS	CAN	45.47	61.56	91	N/A	2.20	83	95.5	
32.500-7011150.0	S 8137	1970	ST. ANN'S	NS	CAN	46.16	60.37	137	B	2.48	83	85.0	15-30cm,11m,70y
32.500-7011160.0	S 8001	1970	GLENCOE	NS	CAN	45.57	61.18	167	B	2.60	83	69.0	18cm,39-47y
32.500-7011170.0	S 8148	1970	BASE GAGETOWN	NB	CAN	45.32	66.21	167	N/A	2.13	83	92.0	
32.500-7020760.0	S 8041	1970	ST. ELZEAR	QUE	CAN	48.15	65.27	365	S	2.35	83	64.5	18cm,15m,70y
32.500-7020770.0	S 8042	1970	LAC LA TORTUE	QUE	CAN	46.39	72.36	131	S	2.08	83	96.5	18cm,15m,70y
32.500-7020800.0	S 8103	1970	WATOPEKA FOREST	QUE	CAN	45.35	71.54	213	S	2.62	83	95.5	18cm,12m,40y
32.500-7020810.0		1970	WOBURN	QUE	CAN	45.18	70.53	853	S	2.89	83	95.5	20cm,14m,70y
32.500-7030550.0	S 8713-1	1970	BEACHBURG	ONT	CAN	45.45	76.50	137	S	2.44	84	33.0	ST.2451
32.500-7030560.0	S 8713-2	1970	BEACHBURG, COTNAM'S IS.	ONT	CAN	45.45	76.50	137	S	2.47	83	89.5	ST.2452
32.500-7030640.0	S 8713-8	1970	BEACHBURG	ONT	CAN	45.45	76.50	137	S	2.27	83	96.0	ST.2460
32.500-7030670.0	S 8714-1	1970	ALICE	ONT	CAN	45.45	77.18	182	S	2.55	83	93.5	ST.2463
32.500-7030700.0	S 8714-3	1970	ALICE	ONT	CAN	45.45	77.18	182	S	2.01	83	95.5	ST.2466
32.500-7030730.0	S 8714-5	1970	ALICE	ONT	CAN	45.45	77.18	182	S	3.20	83	88.5	ST.2469
32.500-7030740.0	S 8143	1970	COCHRANE	ONT	CAN	49.10	81.15	265	N/A	2.22	83	65.0	
32.500-7031130.0		1970	RANWICK MINE	ONT	CAN	47.15	83.35	228	B	2.21	83	91.5	18-24m,90-140y
32.500-7061820.0	S 8160	1970	NORDEGG	ALTA	CAN	52.11	116.00	1524	N/A	2.70	78	87.0	
32.500-7061830.0		1970	ROCKY MTN HOUSE	ALTA	CAN	52.35	115.15	762	N/A	2.60	71	82.5	
32.500-7063220.0	S 8314	1970	SLAVE LAKE	ALTA	CAN	55.14	114.36	610	B	2.32	83	42.4	
32.500-7072020.0	S 8169	1970	SUNDOWN CREEK	BC	CAN	55.20	120.40	1127	N/A	2.11	83	38.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7073740.0	S 8217	1970	PARROTT LK.	BC	CAN	54.11	126.40	823	B	1.83	83	42.7	
32.500-7073760.0	S 8219	1970	GAGNON CR.	BC	CAN	55.15	123.05	914	B	2.00	83	45.7	
32.500-7073800.0	S 8223	1970	MCDAME POST	BC	CAN	59.10	129.15	762	B	1.91	83	47.5	
32.500-7073820.0	S 8225	1970	FORT FRASER	BC	CAN	53.52	124.37	762	B	1.79	83	35.5	
32.500-7073830.0	S 8226	1970	LOWER POST	BC	CAN	59.55	128.30	640	B	1.79	83	35.5	
32.500-7100450.0	S 8171	1971	PASADENA	NFLD	CAN	49.01	57.37	45	N/A	3.01	83	88.2	
32.500-7130500.0		1971	ALICE	ONT	CAN	45.45	77.18	182	N/A	2.70	83	94.0	
32.500-7130510.0		1971	ALICE	ONT	CAN	45.45	77.18	182	N/A	2.28	83	47.8	
32.500-7130540.0		1971	ALICE	ONT	CAN	45.45	77.18	182	N/A	3.36	**		
32.500-7130550.0		1971	ALICE	ONT	CAN	45.45	77.18	182	N/A	2.24	83	71.0	
32.500-7130560.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.48	83	95.0	
32.500-7130570.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	N/A	2.69	83	88.6	
32.500-7130580.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	N/A	2.63	83	96.5	
32.500-7130590.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	N/A	2.50	83	98.5	
32.500-7130600.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	N/A	2.36	83	96.0	
32.500-7130610.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	B	2.50	83	68.0	
32.500-7130620.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.89	83	98.0	
32.500-7130630.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.23	83	97.0	
32.500-7130640.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.90	83	97.4	
32.500-7130650.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	3.21	83	95.0	
32.500-7130660.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	N/A	1.92	83	98.0	
32.500-7130670.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.15	83	87.0	
32.500-7130680.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	N/A	2.27	83	90.5	
32.500-7130700.0		1971	WHITNEY	ONT	CAN	45.31	78.15	457	B(2)	2.49	83	81.0	
32.500-7132350.0	S 8214-1	1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.19	83	70.7	
32.500-7132380.0	S 8214-3	1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.78	83	78.5	
32.500-7132440.0	S 8214-9	1971	WHITNEY	ONT	CAN	45.31	78.15	457	S	2.82	83	99.0	
32.500-7132450.0	S 8016-1	1971	TROUT CREEK, GURD TP.	ONT	CAN	45.59	79.27	335	S	2.41	83	91.5	29cm,11m,28y
32.500-7132460.0	S 8016-2	1971	TROUT CREEK, GURD TP.	ONT	CAN	45.59	79.27	335	S	3.34	83	94.0	32cm,12m,31y
32.500-7132470.0	S 8016-3	1971	TROUT CREEK, GURD TP.	ONT	CAN	45.59	79.27	335	S	3.54	83	72.5	36cm,13m,27y
32.500-7132520.0	S 8016-8	1971	TROUT CREEK, GURD TP.	ONT	CAN	45.59	79.27	335	S	3.33	83	85.5	38cm,12m
32.500-7132540.0	S 8016-10	1971	TROUT CREEK, GURD TP.	ONT	CAN	45.59	79.27	335	S	2.45	83	93.0	29cm,15m,29y
32.500-7132550.0	S 8153-1	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	2.14	83	96.0	
32.500-7132560.0	S 8153-2	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	2.05	83	100.0	
32.500-7132570.0	S 8153-3	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	2.27	83	92.0	
32.500-7132580.0	S 8153-4	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	2.60	83	82.0	
32.500-7132590.0	S 8153-5	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	2.34	83	93.0	
32.500-7132620.0	S 8153-8	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	2.04	83	92.0	
32.500-7132630.0	S 8153-9	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	2.22	83	75.0	
32.500-7132640.0	S 8153-10	1971	BIG JOCKO RIVER	ONT	CAN	46.36	79.10	304	S	3.48	83	90.0	
32.500-7132650.0	S 8019-1	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.44	83	59.5	51cm,23m,65y
32.500-7132660.0	S 8019-2	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.27	83	78.5	46cm,24m,53y
32.500-7132670.0	S 8019-3	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.33	83	94.5	33cm,21m,48y
32.500-7132690.0	S 8019-5	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.91	83	97.5	34cm,23m,78y
32.500-7132700.0	S 8019-6	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.08	83	62.5	
32.500-7132710.0	S 8019-7	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	1.88	83	99.5	
32.500-7132720.0	S 8019-8	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.18	83	92.0	
32.500-7132730.0	S 8019-9	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.10	83	50.0	
32.500-7132740.0	S 8019-10	1971	RUTHERGLEN, CALVIN TP.	ONT	CAN	46.17	79.04	228	S	2.39	83	94.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7132790.0	S 8020-5	1971	ESTAIRE, SERVOS TP.	ONT	CAN	46.14	80.43	213	S	2.26	83	94.0	
32.500-7132810.0	S 8020-7	1971	ESTAIRE, SERVOS TP.	ONT	CAN	46.14	80.43	213	S	1.58	83	93.5	
32.500-7132840.0	S 8037-1	1971	SEARCHMONT	ONT	CAN	46.44	83.56	365	S	2.72	83	98.5	
32.500-7132870.0	S 8037-4	1971	SEARCHMONT	ONT	CAN	46.44	83.56	365	S	2.52	83	59.0	
32.500-7132980.0	S 8039-8	1971	WAWA	ONT	CAN	47.55	84.45	304	S	2.11	83	48.0	
32.500-7133000.0	S 8045-1	1971	BOUCHARD LAKE	ONT	CAN	48.47	85.30	457	S	2.16	83	99.0	
32.500-7133010.0	S 8045-2	1971	BOUCHARD LAKE	ONT	CAN	48.47	85.30	457	S	2.34	83	92.5	
32.500-7133040.0	S 8045-5	1971	BOUCHARD LAKE	ONT	CAN	48.47	85.30	457	S	1.59	83	88.5	
32.500-7133050.0	S 8045-6	1971	BOUCHARD LAKE	ONT	CAN	48.47	85.30	457	S	2.37	83	98.0	
32.500-7133060.0	S 8045-7	1971	BOUCHARD LAKE	ONT	CAN	48.47	85.30	457	S	1.71	83	58.5	
32.500-7133070.0	S 8045-8	1971	BOUCHARD LAKE	ONT	CAN	48.47	85.30	457	S	1.60	83	86.0	
32.500-7133110.0	S 8087-3	1971	PIDGEON RIVER	ONT	CAN	48.01	89.39	304	S	1.94	83	59.5	
32.500-7133160.0	S 8087-8	1971	PIDGEON RIVER	ONT	CAN	48.01	89.39	304	S	1.85	83	54.5	
32.500-7133180.0	S 8088-2	1971	SHEBANDOWAN	ONT	CAN	48.37	90.11	457	S	2.74	83	94.5	
32.500-7133190.0	S 8088-3	1971	SHEBANDOWAN	ONT	CAN	48.37	90.11	457	S	1.92	83	85.5	
32.500-7133210.0	S 8088-5	1971	SHEBANDOWAN	ONT	CAN	48.37	90.11	457	S	2.10	83	66.5	
32.500-7133220.0	S 8088-6	1971	SHEBANDOWAN	ONT	CAN	48.37	90.11	457	S	2.36	83	98.5	
32.500-7133230.0	S 8089-1	1971	EVA LAKE	ONT	CAN	48.40	91.25	426	S	1.47	83	78.5	
32.500-7133260.0	S 8089-4	1971	EVA LAKE	ONT	CAN	48.40	91.25	426	S	1.70	83	69.5	
32.500-7133280.0	S 8089-6	1971	EVA LAKE	ONT	CAN	48.40	91.25	426	S	1.98	83	77.0	
32.500-7133290.0	S 8089-7	1971	EVA LAKE	ONT	CAN	48.40	91.25	426	S	1.54	83	87.0	
32.500-7133300.0	S 8056-1	1971	NIPIGON	ONT	CAN	49.12	88.13	228	S	2.10	83	92.5	
32.500-7133400.0	S 8097-1	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.54	83	98.5	
32.500-7133410.0	S 8097-2	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	2.67	83	96.5	
32.500-7133420.0	S 8097-3	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.88	83	95.5	
32.500-7133430.0	S 8097-4	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.64	83	90.0	
32.500-7133440.0	S 8097-5	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.92	83	76.5	
32.500-7133450.0	S 8097-6	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.64	83	99.0	
32.500-7133460.0	S 8097-7	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.63	83	93.0	
32.500-7133470.0	S 8097-8	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.84	83	89.5	
32.500-7133480.0	S 8097-9	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	1.87	83	98.0	
32.500-7133490.0	S 8097-10	1971	FINLAND	ONT	CAN	48.57	93.56	365	S	2.16	83	90.5	
32.500-7133500.0	S 8098-1	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.14	83	69.0	
32.500-7133510.0	S 8098-2	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.17	83	96.5	
32.500-7133520.0	S 8098-3	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.09	83	82.0	
32.500-7133530.0	S 8098-4	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.22	83	98.0	33cm,15m
32.500-7133540.0	S 8098-5	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.73	83	92.0	34cm,17m
32.500-7133550.0	S 8098-6	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.01	83	78.5	
32.500-7133560.0	S 8098-7	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	1.92	83	54.5	
32.500-7133580.0	S 8098-9	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.11	83	85.0	24cm,20m
32.500-7133590.0	S 8098-10	1971	SIOUX NARROWS	ONT	CAN	49.30	94.04	335	S	2.50	83	63.5	36cm,18m
32.500-7133610.0	S 8099-2	1971	KENORA	ONT	CAN	49.45	94.36	365	S	1.87	83	77.5	27cm,20m
32.500-7133620.0	S 8099-3	1971	KENORA	ONT	CAN	49.45	94.36	365	S	2.36	83	90.0	29cm,18m
32.500-7133630.0	S 8099-4	1971	KENORA	ONT	CAN	49.45	94.36	365	S	1.89	83	88.5	35cm,20m
32.500-7133640.0	S 8099-5	1971	KENORA	ONT	CAN	49.45	94.36	365	S	2.28	83	99.0	20m
32.500-7133650.0	S 8099-6	1971	KENORA	ONT	CAN	49.45	94.36	365	S	2.22	83	97.0	
32.500-7133660.0	S 8099-7	1971	KENORA	ONT	CAN	49.45	94.36	365	S	1.63	83	95.0	
32.500-7133670.0	S 8099-8	1971	KENORA	ONT	CAN	49.45	94.36	365	S	1.70	83	94.0	
32.500-7133700.0	S 8100-1	1971	RAINY LAKE	ONT	CAN	48.42	93.03	335	S	2.08	83	69.5	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7133710.0	S 8100-2	1971	RAINY LAKE	ONT	CAN	48.42	93.03	335	S	2.00	83	35.0	
32.500-7133720.0	S 8100-3	1971	RAINY LAKE	ONT	CAN	48.42	93.03	335	S	2.12	83	68.5	
32.500-7133730.0	S 8100-4	1971	RAINY LAKE	ONT	CAN	48.42	93.03	335	S	1.86	83	37.5	
32.500-7133780.0	S 8106-3	1971	CAMP ROBINSON	ONT	CAN	50.10	94.15	365	S	2.53	83	98.5	
32.500-7133860.0	S 8107-1	1971	SIOUX LOOKOUT	ONT	CAN	50.07	91.50	381	S	2.75	83	67.5	32cm;18m;80w
32.500-7133910.0	S 8108-1	1971	EAR FALLS	ONT	CAN	50.40	93.12	365	S	2.57	83	51.0	26cm;16m
32.500-7133920.0	S 8108-2	1971	EAR FALLS	ONT	CAN	50.40	93.12	365	S	2.27	83	64.0	26cm;16m
32.500-7133930.0	S 8108-3	1971	EAR FALLS	ONT	CAN	50.40	93.12	365	S	2.32	83	91.5	29cm;17m;64w
32.500-7134050.0	S 8109-5	1971	RED LAKE	ONT	CAN	51.02	93.48	365	S	2.35	83	91.0	24cm;16m
32.500-7134100.0	S 8057-1	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	1.79	83	97.5	21m;50+m
32.500-7134110.0	S 8057-2	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	1.49	83	73.5	
32.500-7134120.0	S 8057-3	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	2.26	83	93.5	
32.500-7134130.0	S 8057-4	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	2.10	83	94.0	
32.500-7134140.0	S 8057-5	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	2.25	83	96.0	
32.500-7134150.0	S 8057-6	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	1.72	83	95.0	
32.500-7134160.0	S 8057-7	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	2.05	83	95.5	
32.500-7134170.0	S 8057-8	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	2.25	83	94.0	
32.500-7134180.0	S 8057-9	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	1.74	83	94.0	
32.500-7134190.0	S 8057-10	1971	BLACK STURGEON LAKE	ONT	CAN	49.30	89.03	274	S	1.77	83	82.0	
32.500-7135630.0	S 8048-1	1971	CLUTE TP.	ONT	CAN	49.05	81.15	289	N/A	2.25	83	69.5	
32.500-7136210.0		1971	REEVES TWP. FOLEYET	ONT	CAN	48.15	82.00		N/A	1.94	83	80.0	
32.500-7151000.0	S 8134-1	1971	CANDLE LAKE	SASK	CAN	53.55	104.50	502	B	2.28	83	75.0	20-24m;70-100w
32.500-7151010.0	S 8135	1971	MEADOW LAKE	SASK	CAN	53.50	108.40	640	B	2.13	83	82.5	17-20m;50-70w
32.500-7151030.0	S 8136	1971	BUFFALO NARROWS	SASK	CAN	55.51	108.29	426	S	2.07	83	66.0	
32.500-7230710.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.82	83	99.5	
32.500-7230730.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	N/A	2.35	83	50.5	
32.500-7230750.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	B(2)	2.44	83	85.0	
32.500-7230770.0		1972	SAND L. ROAD	ONT	CAN	45.50	77.20	182	S	2.77	83	93.0	
32.500-7230780.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	3.64	83	58.5	
32.500-7230790.0		1972	SAND L. ROAD	ONT	CAN	45.50	77.20	182	S	2.39	83	96.5	
32.500-7230800.0		1972	SAND L. ROAD	ONT	CAN	45.50	77.20	182	N/A	2.52	83	92.5	
32.500-7230810.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.98	83	88.0	30cm;9m
32.500-7230820.0		1972	BEACHBURG	ONT	CAN	45.45	76.50	137	N/A	3.45	83	100.0	
32.500-7230830.0		1972	BEACHBURG	ONT	CAN	45.45	76.50	137	N/A	3.02	83	95.5	
32.500-7230840.0		1972	BEACHBURG	ONT	CAN	45.45	76.50	137	S	2.80	**		38cm;14m
32.500-7230850.0		1972	BEACHBURG	ONT	CAN	45.45	76.50	137	S	2.93	83	90.0	25cm;12m
32.500-7230860.0		1972	BEACHBURG	ONT	CAN	45.45	76.50	137	S	2.41	83	85.0	48cm;18m
32.500-7230870.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	B	2.88	83	82.5	15-20cm;9-12m
32.500-7230880.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.76	83	96.5	53cm;12m
32.500-7230890.0	S 8319-1	1972	DAVIS MILLS	ONT	CAN	45.45	77.15	152	S	2.83	83	86.0	53cm;20m
32.500-7230970.0		1972	BIGGAR LAKE	ONT	CAN	45.52	77.30	243	S	2.78	83	64.5	
32.500-7230980.0		1972	BIGGAR LAKE	ONT	CAN	45.52	77.30	243	S	2.89	**		
32.500-7231050.0	S 8029-6	1972	RANKIN	ONT	CAN	45.45	77.10	152	S	3.22	83	90.5	25cm;9m
32.500-7231140.0	S 8027-4	1972	IRVINE CREEK	ONT	CAN	45.00	77.17	300	S	2.71	83	85.0	
32.500-7231160.0	S 8027-6	1972	IRVINE CREEK	ONT	CAN	45.00	77.17	300	S	3.32	83	86.5	
32.500-7231230.0	S 8027-13	1972	IRVINE CREEK	ONT	CAN	45.00	77.17	300	B(3)	2.49	83	92.5	
32.500-7231250.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	N/A	3.04	**		
32.500-7231260.0		1972	APSLEY	ONT	CAN	44.45	78.08	365	N/A	2.90	**		
32.500-7231270.0		1972	APSLEY	ONT	CAN	44.45	78.08	365	N/A	2.02	83	96.5	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7232090.0		1972	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	R	2.58	**		
32.500-7232640.0	S 8021-7	1972	NAIRN TP.	ONT	CAN	46.20	81.41	243	S	2.35	83	83.5	
32.500-7330600.0	S 8110-3	1973	NEEDLE LAKE	ONT	CAN	49.57	92.31	396	R	2.07	83	85.0	
32.500-7330620.0	R 8110-5	1973	NEEDLE LAKE	ONT	CAN	49.57	92.31	396	S	3.63	84	27.0	
32.500-7330850.0	S 8068-6	1973	UPSALA	ONT	CAN	49.04	90.31	487	R	2.16	83	53.0	
32.500-7330870.0	S 8068-8	1973	UPSALA	ONT	CAN	49.04	90.31	487	S	2.22	83	55.0	
32.500-7330880.0	S 8068-9	1973	UPSALA	ONT	CAN	49.04	90.31	487	S	2.15	83	33.0	
32.500-7331060.0	R 8113-3	1973	UCHI LAKE	ONT	CAN	50.48	93.08	381	R	1.97	83	43.0	
32.500-7333330.0	S 8114	1973	EAR FALLS	ONT	CAN	50.42	93.22	381	B	2.22	83	90.0	
32.500-7333340.0	S 8115	1973	RED LAKE, DOME TP.	ONT	CAN	51.06	93.46	396	B	2.18	83	79.0	
32.500-7333350.0	S 8102	1973	WHITE DOG FALLS	ONT	CAN	50.07	94.52	350	B	2.16	83	81.0	
32.500-7341260.0	R 8130	1973	RIVERTON	MAN	CAN	51.00	97.00	213	B	2.52	76	67.5	
32.500-7341270.0	S 8131	1973	BERNIC L.	MAN	CAN	50.25	95.36	274	B	2.40	83	95.0	
32.500-7341280.0	S 8128	1973	ANGLE INLET	MAN	CAN	49.19	95.20	335	B	2.11	83	98.0	
32.500-7341290.0	S 8129	1973	WEST HAWK L.	MAN	CAN	49.47	95.15	335	B	2.14	76	87.0	
32.500-7342210.0	S 8716-2	1973	N.W. DUCK MT.	MAN	CAN	51.45	101.12	670	N/A	2.24	84	22.0	
32.500-7342240.0	S 8716-5	1973	N.W. DUCK MT.	MAN	CAN	51.45	101.12	670	N/A	2.36	**		
32.500-7350190.0		1973	MEADOW LAKE	SASK	CAN	54.10	108.19		N/A	2.18	84	12.0	
32.500-7430410.0	S 8024-2	1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	R	2.35	75	99.8	46cm;14m
32.500-7430420.0	S 8024-3	1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	S	1.91	75	99.7	34cm;14m
32.500-7430430.0	S 8024-4	1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	R	1.83	75	99.5	38cm;15m
32.500-7430450.0	S 8024-6	1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	S	2.17	75	98.7	42cm;20m
32.500-7430460.0	S 8024-7	1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	2.58	75	96.0	39cm;12m
32.500-7430500.0	R 8024-11	1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	S	1.93	83	44.0	
32.500-7430540.0	S 8155-1	1974	DOUGLAS	ONT	CAN	45.30	77.01	121	S	2.57	77	97.0	46cm;22m
32.500-7430560.0	S 8155-3	1974	DOUGLAS	ONT	CAN	45.30	77.01	121	R	2.26	83	85.0	38cm;17m
32.500-7430570.0	R 8155-4	1974	DOUGLAS	ONT	CAN	45.30	77.01	121	S	2.00	77	97.5	32cm;15m
32.500-7430580.0	S 8155-5	1974	DOUGLAS	ONT	CAN	45.30	77.01	121	R	2.47	77	69.0	41cm;17m
32.500-7430590.0	S 8155-6	1974	DOUGLAS	ONT	CAN	45.33	77.00	121	R	2.66	77	94.0	43cm;15m
32.500-7430600.0	S 8155-7	1974	DOUGLAS	ONT	CAN	45.33	77.00	121	R	1.91	77	94.0	27cm;14m
32.500-7430610.0	S 8155-8	1974	DOUGLAS	ONT	CAN	45.33	77.00	121	R	2.43	83	94.0	33cm;17m
32.500-7430620.0	R 8155-9	1974	DOUGLAS	ONT	CAN	45.33	77.00	121	S	2.38	77	95.5	38cm;14m
32.500-7430630.0	R 8155-10	1974	DOUGLAS	ONT	CAN	45.33	77.00	121	S	2.87	83	36.0	47cm;21m
32.500-7430650.0	S 8155-12	1974	DOUGLAS	ONT	CAN	45.38	77.04	152	S	2.46	78	97.8	24cm;12m
32.500-7430660.0	R 8155-13	1974	DOUGLAS	ONT	CAN	45.38	77.04	152	S	2.86	83	94.0	37cm;12m
32.500-7430670.0	S 8028-1	1974	RENFREW	ONT	CAN	45.28	76.38	121	S	2.71	75	92.5	46cm;16m
32.500-7430700.0	R 8028-4	1974	RENFREW	ONT	CAN	45.28	76.38	121	S	1.99	75	98.5	47cm;19m
32.500-7430710.0	S 8028-5	1974	RENFREW	ONT	CAN	45.28	76.44	121	R	2.31	75	87.5	22cm;9m
32.500-7430750.0	S 8028-9	1974	RENFREW	ONT	CAN	45.28	76.44	121	S	2.39	75	96.5	36cm;18m
32.500-7430760.0	S 8028-10	1974	RENFREW	ONT	CAN	45.28	76.44	121	R	2.07	75	96.0	30cm;15m
32.500-7430790.0	R 8028-13	1974	RENFREW	ONT	CAN	45.28	76.44	121	S	2.79	83	98.0	22cm;11m
32.500-7430800.0	S 8028-14	1974	RENFREW	ONT	CAN	45.28	76.44	121	S	3.34	83	94.0	24cm;11m
32.500-7430810.0	R 8028-15	1974	RENFREW	ONT	CAN	45.28	76.44	121	R	2.59	83	97.0	27cm;9m
32.500-7430830.0	S 8032-1	1974	ANTRIM	ONT	CAN	45.19	76.11	121	R	2.19	75	99.5	41cm;12m
32.500-7430850.0	S 8032-3	1974	ANTRIM	ONT	CAN	45.19	76.11	121	S	2.11	75	97.0	41cm;15m
32.500-7430870.0	S 8032-5	1974	ANTRIM	ONT	CAN	45.19	76.11	121	R	2.73	75	66.0	38cm;12m
32.500-7430940.0	S 8025-1	1974	BANCROFT	ONT	CAN	45.06	77.58	381	R	2.25	77	85.5	25cm;9m
32.500-7430950.0	S 8025-2	1974	BANCROFT	ONT	CAN	45.06	77.58	381	R	1.94	83	82.0	28cm;14m
32.500-7430970.0	S 8025-4	1974	BANCROFT	ONT	CAN	45.06	77.58	381	R	1.83	75	99.5	35cm;15m

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7430980.0	S 8025-5	1974	BANCROFT	ONT	CAN	45.06	78.02	396	S	1.95	77	97.5	44cm,27m
32.500-7431000.0	S 8025-7	1974	BANCROFT	ONT	CAN	45.06	78.02	396	S	1.87	77	89.0	48cm,24m
32.500-7431010.0	S 8025-8	1974	BANCROFT	ONT	CAN	45.06	78.02	396	S	1.77	77	94.5	45cm,30m
32.500-7431020.0	S 8025-9	1974	BANCROFT	ONT	CAN	45.06	78.02	396	S	2.57	77	88.5	41cm,23m
32.500-7431030.0	S 8025-10	1974	BANCROFT	ONT	CAN	45.06	78.02	396	S	3.22	75	93.5	51cm,24m
32.500-7431040.0	S 8211-1	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.80	75	93.5	53cm,15m
32.500-7431050.0	S 8211-2	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.35	75	84.7	54cm,17m
32.500-7431060.0	S 8211-3	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.15	75	69.5	56cm,18m
32.500-7431070.0	S 8211-4	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.29	75	94.0	32cm,21m
32.500-7431080.0	S 8211-5	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.31	83	86.0	42cm,20m
32.500-7431090.0	S 8211-6	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.35	83	90.0	49cm,17m
32.500-7431100.0	S 8211-7	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.58	83	96.0	39cm,20m
32.500-7431110.0	S 8211-8	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.18	83	98.0	35cm,18m
32.500-7431120.0	S 8211-9	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.59	75	86.0	30cm,20m
32.500-7431130.0	S 8211-10	1974	APSLEY, ANSTRUTHER TP.	ONT	CAN	44.55	78.04	365	S	2.64	75	90.5	39cm,18m
32.500-7431150.0	S 8210-2	1974	SILVER LAKE	ONT	CAN	44.49	76.41	182	S	2.06	77	87.0	32cm,10m
32.500-7431230.0	S 8210-10	1974	SILVER LAKE	ONT	CAN	44.49	76.41	182	S	2.28	77	92.5	28cm,20m
32.500-7431240.0	S 8210	1974	SILVER LAKE	ONT	CAN	44.49	76.41	182	S	2.57	83	96.0	26cm,12m
32.500-7431250.0	S 8210	1974	SILVER LAKE	ONT	CAN	44.49	76.41	182	S(10)	2.20	77	61.0	9-18m
32.500-7431260.0	S 8210	1974	SILVER LAKE	ONT	CAN	44.49	76.41	182	S	2.71	83	99.0	26cm,17m
32.500-7431270.0	S 8015-47	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.17	77	96.0	54cm,20m
32.500-7431280.0	S 8015-1	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.73	74	99.2	37cm,20m
32.500-7431290.0	S 8015-2	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.29	74	99.2	32cm,12m
32.500-7431300.0	S 8015-3	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.22	77	87.0	48cm,15m
32.500-7431310.0	S 8015-4	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.94	77	97.5	45cm,20m
32.500-7431320.0	S 8015-5	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.15	74	100.0	35cm,15m
32.500-7431330.0	S 8015-6	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.33	83	98.0	38cm,17m
32.500-7431340.0	S 8015-7	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.34	74	99.7	32cm,17m
32.500-7431350.0	S 8015-8	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.63	77	99.0	34cm,17m
32.500-7431360.0	S 8015-9	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.97	74	99.7	26cm,9m
32.500-7431370.0	S 8015-10	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.67	83	98.0	50cm,14m
32.500-7431380.0	S 8015-11	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.17	74	98.5	38cm,18m
32.500-7431390.0	S 8015-12	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.09	83	100.0	34cm,18m
32.500-7431400.0	S 8015-13	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.77	74	97.5	37cm,15m
32.500-7431410.0	S 8015-14	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.42	83	94.0	37cm,13m
32.500-7431420.0	S 8015-15	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.00	74	98.2	30cm,15m
32.500-7431430.0	S 8015-16	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.31	83	100.0	38cm,20m
32.500-7431440.0	S 8015-17	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.94	74	98.5	45cm,24m
32.500-7431450.0	S 8015-18	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.41	83	100.0	40cm,18m
32.500-7431460.0	S 8015-19	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.50	74	95.0	42cm,20m
32.500-7431470.0	S 8015-20	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.99	74	99.2	36cm,20m
32.500-7431480.0	S 8015-21	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S		83	97.0	25cm,17m
32.500-7431490.0	S 8015-22	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.53	74	98.5	41cm,17m
32.500-7431510.0	S 8015-24	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.96	74	98.5	40cm,17m
32.500-7431520.0	S 8015-25	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.25	74	98.6	40cm,20m
32.500-7431530.0	S 8015-26	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.28	83	100.0	30cm,17m
32.500-7431540.0	S 8015-27	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.76	74	98.4	40cm,18m
32.500-7431550.0	S 8015-28	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.29	83	98.0	43cm,17m
32.500-7431560.0	S 8015-29	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	3.43	83	100.0	48cm,20m

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7431570.0	S 8015-30	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.72	83	100.0	51cm,18m
32.500-7431580.0	S 8015-31	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.22	74	93.5	61cm,20m
32.500-7431590.0	S 8015-32	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.94	74	99.3	
32.500-7431600.0	S 8015-33	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.34	74	98.0	
32.500-7431610.0	S 8015-34	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.18	83	100.0	30cm,11m
32.500-7431620.0	S 8015-35	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.20	**	97.8	29cm,14m
32.500-7431630.0	S 8015-36	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.02	83	100.0	41cm,17m
32.500-7431640.0	S 8015-37	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.32	74	98.6	23cm,14m
32.500-7431650.0	S 8015-38	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.86	83	100.0	46cm,18m
32.500-7431660.0	S 8015-39	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.15	74	99.5	37cm,21m
32.500-7431670.0	S 8015-40	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.19	83	100.0	33cm,18m
32.500-7431680.0	S 8015-41	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.93	74	95.3	25cm,15m
32.500-7431690.0	S 8015-42	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.37	83	100.0	29cm,17m
32.500-7431700.0	S 8015-43	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.90	75	99.7	38cm,17m
32.500-7431710.0	S 8015-44	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	1.98	83	100.0	46cm,17m
32.500-7431720.0	S 8015-45	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.21	75	99.5	43cm,17m
32.500-7431730.0	S 8015-46	1974	WHITNEY	ONT	CAN	45.32	78.16	396	S	2.31	83	100.0	51cm,20m
32.500-7431740.0	S 8026-1	1974	FORESTERS FALLS	ONT	CAN	45.41	76.48	137	S	2.55	77	98.0	41cm,14m
32.500-7431750.0	S 8026-2	1974	FORESTERS FALLS	ONT	CAN	45.41	76.48	137	S	3.21	77	98.5	28cm,11m
32.500-7431780.0	S 8026-5	1974	FORESTERS FALLS	ONT	CAN	45.41	76.48	137	S	2.33	77	94.5	66cm,16m
32.500-7431860.0	S 8026-13	1974	BEACHBURG	ONT	CAN	45.44	76.51	152	S	2.32	75	99.0	27cm,8m
32.500-7431890.0		1974	PET. FOR EXP. STATION	ONT	CAN	46.00	77.26	170	N/A	3.11	**		EXP 194-D-1
32.500-7431910.0	S 8024-16	1974	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.27	182	S	3.78	77	87.5	24cm,12m
32.500-7431930.0	S 8024-18	1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	160	S	2.13	77	100.0	56cm,21m
32.500-7431950.0	S 8024-20	1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	160	S	1.94	77	95.0	51cm,15m
32.500-7431960.0	S 8024-21	1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	160	S	2.33	77	93.0	56cm,17m
32.500-7431970.0	S 8024-22	1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	160	S	1.90	77	97.0	46cm,14m
32.500-7431980.0	S 8024-23	1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	160	S	2.22	83	53.0	36cm,16m
32.500-7431990.0	S 8024-24	1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	160	S	2.59	77	93.5	33cm,20m
32.500-7433630.0	S 2447	1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	170	N/A	3.53	84	24.0	
32.500-7433840.0		1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	170	N/A	3.06	**		
32.500-7433850.0		1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	170	N/A	2.56	**		
32.500-7434280.0		1974	SWASTIKA, BURT TWP	ONT	CAN	48.01	80.20	300	S	2.13	83	82.0	
32.500-7434290.0		1974	ESTAIRE, SERVOS TWP	ONT	CAN	46.14	80.43	213	N/A	2.59	83	87.0	GEORGIAN BAY
32.500-7434320.0		1974	SERVOS TWP.	ONT	CAN	46.14	80.43		N/A	1.91	83	84.0	
32.500-7434420.0	S 8049-2	1974	CLUTE TP.	ONT	CAN	49.10	81.14	289	N/A	2.32	83	99.0	
32.500-7434480.0	S 8049-8	1974	CLUTE TP.	ONT	CAN	49.10	81.14	289	N/A	3.08	83	91.0	
32.500-7434950.0		1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	S	2.17	83	58.0	ST.1866 X 1865
32.500-7434960.0		1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	CP	2.00	**		ST.1866 X 1853
32.500-7434970.0		1974	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.20	182	SP	1.91	**		ST.1865 SELFED
32.500-7435000.0		1974	PET. FOR. EXP. STA.	ONT	CAN	46.00	77.27		SO	2.70	**		
32.500-7435490.0	S 8050	1974	WHITE RIVER	ONT	CAN	48.33	85.12	450	S	2.58	83	79.0	
32.500-7435550.0	S 8017-2	1974	MCKELLAR	ONT	CAN	45.35	79.52	275	S	1.94	83	87.0	
32.500-7435570.0	S 8017-3	1974	MCKELLAR	ONT	CAN	45.35	79.52	275	S	2.35	83	84.0	
32.500-7435630.0	S 8239	1974	DORSET	ONT	CAN	45.16	78.58	335	S	2.83	83	69.0	
32.500-7435690.0	S 8239-3	1974	DORSET	ONT	CAN	45.16	78.58	335	S	2.35	83	95.0	
32.500-7435700.0	S 8239-4	1974	DORSET	ONT	CAN	45.16	78.58	335	S	1.88	83	49.0	
32.500-7435750.0	S 8031-2	1974	MATTAWAN TP.	ONT	CAN	46.23	78.54	305	S	2.79	83	41.0	
32.500-7435840.0	S 8038-2	1974	ENGLEHART	ONT	CAN	47.52	79.55	215	S	2.59	**		

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7435850.0	S 8038-3	1974	ENGLEHART	ONT	CAN	47.52	79.55	215	S	2.13	83	73.0	
32.500-7435870.0	S 8038-4	1974	ENGLEHART	ONT	CAN	47.52	79.55	215	S	1.90	83	61.0	
32.500-7435890.0	S 8038-5	1974	ENGLEHART	ONT	CAN	47.52	79.55	215	S	2.02	83	71.0	
32.500-7435900.0	S 8038-6	1974	ENGLEHART	ONT	CAN	47.52	79.55	215	S	2.35	83	89.0	
32.500-7435910.0	S 8038-7	1974	ENGLEHART	ONT	CAN	47.52	79.55	215	S	2.59	83	69.0	
32.500-7435920.0	S 8235	1974	DENTON TP.	ONT	CAN	48.19	81.46	335	R	1.85	83	77.0	
32.500-7436010.0		1974	SOUTH RIVER	ONT	CAN	45.54	79.23	365	S	2.53	83	94.0	
32.500-7436060.0		1974	SOUTH RIVER	ONT	CAN	45.54	79.23	365	S	2.50	83	98.0	
32.500-7436070.0		1974	SOUTH RIVER	ONT	CAN	45.54	79.23	365	S	2.31	83	87.0	
32.500-7436100.0		1974	SOUTH RIVER	ONT	CAN	45.54	79.23	365	S	2.34	83	53.0	
32.500-7436210.0	S 8156-4	1974	SHANNONVILLE	ONT	CAN	44.14	77.15	90	N/A	1.72	83	79.0	
32.500-7436260.0	S 8013-2	1974	POLAND	ONT	CAN	45.03	76.35	245	S	2.75	83	85.0	
32.500-7436280.0	S 8013-4	1974	POLAND	ONT	CAN	45.03	76.35	245	S	2.25	83	71.0	
32.500-7436290.0	S 8013-5	1974	POLAND	ONT	CAN	45.03	76.35	245	S	2.24	**		
32.500-7436300.0	S 8013-6	1974	POLAND	ONT	CAN	45.03	76.35	245	S	1.92	83	91.0	
32.500-7436330.0	S 8209-1	1974	MARLBOROUGH TP.	ONT	CAN	45.02	75.50	90	S	2.82	83	37.0	
32.500-7436340.0	S 8209-2	1974	MARLBOROUGH TP.	ONT	CAN	45.02	75.50	90	S	1.80	83	54.0	
32.500-7436380.0	S 8209-4	1974	MARLBOROUGH TP.	ONT	CAN	45.02	75.50	90	S	2.67	83	57.0	
32.500-7436390.0	S 8011-1	1974	HAVELOCK	ONT	CAN	44.26	77.50	180	N/A	2.67	**		
32.500-7436410.0	S 8011-3	1974	HAVELOCK	ONT	CAN	44.26	77.50	180	S	2.29	**		
32.500-7436630.0	S 8044-9	1974	SWASTIKA, BURT TP.	ONT	CAN	48.02	80.22	300	S	2.24	83	77.0	
32.500-7436850.0	S 8046-2	1974	GURNEY TP.	ONT	CAN	49.30	82.15	215	S		**		
32.500-7436910.0	S 8053-2	1974	FRASERDALE	ONT	CAN	49.50	81.35	215	S		**		
32.500-7466950.0	S 8142	1974	FOOTNER LAKE	ALTA	CAN	57.55	115.30	460	R	2.32	83	86.0	
32.500-7466960.0	S 8316	1974	SLAVE LAKE FOREST	ALTA	CAN	56.38	114.35	730	R	2.05	83	40.0	
32.500-7477170.0	S 8227	1974	CANYON LK.	BC	CAN	53.01	123.12	1280	R	1.89	83	39.0	
32.500-7477180.0	S 8228	1974	STRATHNAVER	BC	CAN	53.18	122.12	1158	R	2.04	**		
32.500-7477190.0	S 8229	1974	UNITI CR.	BC	CAN	53.08	122.08	945	B	1.87	83	69.0	
32.500-7477200.0	S 8230	1974	WILLIAMSON CR.	BC	CAN	49.17	118.53	671	R	2.18	83	61.0	
32.500-7477220.0	S 8232	1974	GREYBACK MTN.	BC	CAN	49.36	119.17	1585	R	1.76	83	50.0	
32.500-7531520.0	S 8067-2	1975	MANITOUWADGE, STRUTHEM	ONT	CAN	48.43	85.52	335	S	3.41	83	100.0	
32.500-7531530.0	S 8067-3	1975	MANITOUWADGE, STRUTHEM	ONT	CAN	48.43	85.52	335	S	2.39	83	100.0	
32.500-7531570.0	S 8067-7	1975	MANITOUWADGE, STRUTHEM	ONT	CAN	48.43	85.52	335	S	2.66	76	94.5	
32.500-7531620.0	S 8066-2	1975	MANITOUWADGE	ONT	CAN	49.17	85.58	305	S	2.06	83	85.0	
32.500-7531630.0	S 8066-3	1975	MANITOUWADGE	ONT	CAN	49.17	85.58	305	S	2.03	**		
32.500-7531680.0	S 8066-8	1975	MANITOUWADGE	ONT	CAN	49.17	85.58	305	S	2.03	83	90.0	
32.500-7531700.0	S 8066-10	1975	MANITOUWADGE	ONT	CAN	49.17	85.58	305	S	2.84	83	94.0	
32.500-7531730.0	S 8085-3	1975	MANITOUWADGE	ONT	CAN	49.17	85.54	260	S	2.09	83	98.0	
32.500-7531760.0	S 8085-6	1975	MANITOUWADGE	ONT	CAN	49.17	85.54	260	S	3.40	83	97.0	
32.500-7531800.0	S 8085-10	1975	MANITOUWADGE	ONT	CAN	49.17	85.54	260	S	2.19	83	99.0	
32.500-7531810.0	S 8061-1	1975	CARAMAT	ONT	CAN	49.36	86.09	305	B	1.92	83	100.0	12-30m:40-100w
32.500-7531820.0	S 8061-2	1975	CARAMAT	ONT	CAN	49.36	86.09	305	S	2.08	84	97.5	
32.500-7531830.0	S 8061-3	1975	CARAMAT	ONT	CAN	49.36	86.09	305	S	1.66	**		
32.500-7531840.0	S 8061-4	1975	CARAMAT	ONT	CAN	49.36	86.09	305	S	2.58	83	88.0	
32.500-7531880.0	S 8061-8	1975	CARAMAT	ONT	CAN	49.36	86.09	305	S	2.52	83	96.0	
32.500-7531890.0	S 8061-9	1975	CARAMAT	ONT	CAN	49.36	86.09	305	S	2.20	76	96.0	
32.500-7531970.0	S 8052-7	1975	WHITE RIVER	ONT	CAN	48.37	85.19	305	S	2.47	83	96.0	
32.500-7532030.0	S 8051-3	1975	HOBERT	ONT	CAN	48.42	85.35	305	S	2.48	83	69.0	
32.500-7532060.0	S 8051-6	1975	HOBERT	ONT	CAN	48.42	85.35	305	S	2.11	83	99.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7532090.0	S 8051-9	1975	MOBERT	ONT	CAN	48.42	85.35	305	S	2.52	**		
32.500-7532110.0	S 8064-1	1975	TERRACE BAY	ONT	CAN	48.47	87.07	200	S	2.30	83	95.0	
32.500-7532120.0	S 8064-2	1975	TERRACE BAY	ONT	CAN	48.47	87.07	200	S	2.38	83	52.0	
32.500-7532150.0	S 8064-5	1975	TERRACE BAY	ONT	CAN	48.47	87.07	200	S	2.23	**		
32.500-7532180.0	S 8064-8	1975	TERRACE BAY	ONT	CAN	48.47	87.07	200	S	1.93	83	100.0	
32.500-7532200.0	S 8064-10	1975	TERRACE BAY	ONT	CAN	48.47	87.07	200	S	3.10	83	91.0	
32.500-7532290.0	S 8081-9	1975	FALSE CREEK	ONT	CAN	49.52	86.52	365	S	2.05	83	90.0	
32.500-7532300.0	S 8081-10	1975	FALSE CREEK	ONT	CAN	49.52	86.52	365	S	2.20	83	100.0	
32.500-7532330.0	S 8062-3	1975	GREER ROAD	ONT	CAN	49.56	87.07	305	S	2.10	83	100.0	
32.500-7532380.0	S 8062-8	1975	GREER ROAD	ONT	CAN	49.56	87.07	305	S	1.87	83	97.0	
32.500-7532400.0	S 8062-10	1975	GREER ROAD	ONT	CAN	49.56	87.07	305	S	2.37	83	99.0	
32.500-7532420.0	S 8082-2	1975	BEARDMORE	ONT	CAN	49.33	88.00	365	S	2.17	83	100.0	
32.500-7532430.0	S 8082-3	1975	BEARDMORE	ONT	CAN	49.33	88.00	365	S	2.58	76	95.0	
32.500-7532490.0	S 8082-9	1975	BEARDMORE	ONT	CAN	49.33	88.00	365	S	1.88	83	100.0	
32.500-7532510.0	S 8060-1	1975	WAWEIG LAKE	ONT	CAN	50.09	89.07	305	S	1.60	83	98.0	25-36cm;18-21m
32.500-7532520.0	S 8060-2	1975	WAWEIG LAKE	ONT	CAN	50.09	89.07	305	S	1.96	83	98.0	
32.500-7532540.0	S 8060-4	1975	WAWEIG LAKE	ONT	CAN	50.09	89.07	305	S	1.80	83	96.0	
32.500-7532550.0	S 8060-5	1975	WAWEIG LAKE	ONT	CAN	50.09	89.07	305	S	2.28	83	98.0	
32.500-7532570.0	S 8060-7	1975	WAWEIG LAKE	ONT	CAN	50.09	89.07	305	S	1.97	83	100.0	
32.500-7532590.0	S 8060-9	1975	WAWEIG LAKE	ONT	CAN	50.09	89.07	305	S	1.90	83	94.0	
32.500-7532600.0	S 8060-10	1975	WAWEIG LAKE	ONT	CAN	50.09	89.07	305	S	2.24	83	98.0	
32.500-7532610.0	S 8083-1	1975	KENOGAMI RIVER	ONT	CAN	49.55	86.29	305	S	1.94	83	98.0	9m
32.500-7532630.0	S 8083-3	1975	KENOGAMI RIVER	ONT	CAN	49.55	86.29	305	S	2.57	83	100.0	
32.500-7532650.0	S 8083-5	1975	KENOGAMI RIVER	ONT	CAN	49.55	86.29	305	S	1.83	83	100.0	
32.500-7532660.0	S 8083-6	1975	KENOGAMI RIVER	ONT	CAN	49.55	86.29	305	S	2.18	**		
32.500-7532670.0	S 8083-7	1975	KENOGAMI RIVER	ONT	CAN	49.55	86.29	305	S	2.06	**		
32.500-7532680.0	S 8083-8	1975	KENOGAMI RIVER	ONT	CAN	49.55	86.29	305	S	2.41	83	97.0	
32.500-7532730.0	S 8063-3	1975	PIC RIVER	ONT	CAN	48.42	86.15	240	S	2.86	76	92.5	
32.500-7532780.0	S 8063-8	1975	PIC RIVER	ONT	CAN	48.42	86.15	240	S	1.88	83	95.0	
32.500-7532820.0	S 8093-2	1975	MCKENZIE	ONT	CAN	48.33	88.58	275	S	1.90	76	94.5	
32.500-7532860.0	S 8093-6	1975	MCKENZIE	ONT	CAN	48.33	88.58	275	S	2.27	76	85.5	
32.500-7533160.0	S 8069-8	1975	TWIST LAKE	ONT	CAN	49.22	89.45	425	S	2.02	83	43.0	
32.500-7533180.0	S 8069-10	1975	TWIST LAKE	ONT	CAN	49.22	89.45	425	S	2.19	**		
32.500-7533400.0	S 8065-3	1975	O'SULLIVAN LAKE	ONT	CAN	50.32	87.01	335	S	1.85	76	55.0	
32.500-7533410.0	S 8065-4	1975	O'SULLIVAN LAKE	ONT	CAN	50.32	87.01	335	S	1.95	**		
32.500-7533470.0	S 8076-1	1975	LONG LAKE	ONT	CAN	49.13	87.04	335	S	2.46	83	75.0	
32.500-7533500.0	S 8076-4	1975	LONG LAKE	ONT	CAN	49.13	87.04	335	S	2.82	83	80.0	
32.500-7533510.0	S 8076-5	1975	LONG LAKE	ONT	CAN	49.13	87.04	335	S	2.06	83	72.0	
32.500-7533520.0	S 8076-6	1975	LONG LAKE	ONT	CAN	49.13	87.04	335	S	2.10	83	70.0	
32.500-7533640.0	S 8047-8	1975	ARNOTT TP.	ONT	CAN	49.37	84.35	275	S	2.50	83	26.0	
32.500-7533750.0	S 8047-19	1975	ARNOTT TP.	ONT	CAN	49.37	84.35	275	S	2.82	83	92.0	
32.500-7533850.0	S 8075-10	1975	NAKINA	ONT	CAN	50.12	86.47	335	S	2.18	83	45.0	
32.500-7533920.0	S 8240-5	1975	PARKS LAKE	ONT	CAN	49.28	87.34	460	S	3.06	83	90.0	
32.500-7533950.0	S 8240-8	1975	PARKS LAKE	ONT	CAN	49.28	87.34	460	S	1.86	83	83.0	
32.500-7534070.0	S 8084-9	1975	SHABAQUA CORNERS	ONT	CAN	48.37	89.54	410	S	2.64	83	91.0	
32.500-7534130.0	S 8077-5	1975	S. ONAMAN RIVER	ONT	CAN	50.02	87.39	305	S	2.30	76	85.0	
32.500-7534160.0	S 8077-8	1975	S. ONAMAN RIVER	ONT	CAN	50.02	87.39	305	S	2.02	83	60.0	
32.500-7534180.0	S 8077-10	1975	S. ONAMAN RIVER	ONT	CAN	50.02	87.39	305	S	1.93	83	74.0	
32.500-7534190.0	S 8043-1	1975	PAGWA	ONT	CAN	49.46	85.25	245	S	2.51	83	86.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7534210.0	S 8043-3	1975	PAGWA	ONT	CAN	49.46	85.25	245	S	2.48	83	91.0	
32.500-7534240.0	S 8043-6	1975	PAGWA	ONT	CAN	49.46	85.25	245	S	2.41	83	84.0	
32.500-7534260.0	S 8043-8	1975	PAGWA	ONT	CAN	49.46	85.25	245	S	2.32	83	85.0	
32.500-7534280.0	S 8043-10	1975	PAGWA	ONT	CAN	49.46	85.25	245	S	2.44	**		
32.500-7534290.0	S 8079-1	1975	JELLICOE	ONT	CAN	49.42	87.25	365	S	2.41	83	89.0	
32.500-7534310.0	S 8079-3	1975	JELLICOE	ONT	CAN	49.42	87.25	365	S	1.91	**		
32.500-7534350.0	S 8079-7	1975	JELLICOE	ONT	CAN	49.42	87.25	365	S	2.11	83	65.0	
32.500-7534370.0	S 8079-9	1975	JELLICOE	ONT	CAN	49.42	87.25	365	S	2.26	83	87.0	
32.500-7534450.0	S 8078-7	1975	AUDEN	ONT	CAN	50.09	87.53	335	S	1.90	83	52.0	
32.500-7534580.0	S 8090	1975	THUNDER BAY, BLAKE TP.	ONT	CAN	48.13	89.24	305	R	2.16	83	71.0	
32.500-7534590.0	S 8073	1975	THUNDER BAY MACMASTER TP	ONT	CAN	48.58	88.37	305	R	2.07	83	99.0	
32.500-7534620.0	S 8072	1975	THUNDER BAY, DOG RIVER	ONT	CAN	49.23	89.45	425	R	1.81	83	98.0	
32.500-7534630.0	S 8092	1975	GRAHAM	ONT	CAN	49.15	90.35	490	R	1.69	83	91.0	
32.500-7534640.0	S 8322	1975	THUNDER BAY	ONT	CAN	49.05	89.11	455	R	2.02	83	88.0	
32.500-7561460.0	S 8141	1975	ATHABASCA FOR.	ALTA	CAN	57.08	111.38	275	R	2.04	76	80.0	
32.500-7614220.0	S 8204	1976	PINEVALE	NS	CAN	45.29	61.58	150	N/A	2.39	77	76.5	
32.500-7614240.0	S 8206	1976	MCGRATH'S MTN.	NS	CAN	45.32	62.21	150	N/A		77	61.0	
32.500-7630720.0		1976	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	*	2.63	76	86.0	* 1 OR 2 TREES
32.500-7631010.0	S 8161-1	1976	ALICE	ONT	CAN	45.46	77.17	150	S	2.10	76	95.0	41cm;18m;50y
32.500-7631020.0	S 8161-2	1976	ALICE	ONT	CAN	45.46	77.17	150	S	2.49	76	96.0	34cm;17m;40y
32.500-7631030.0	S 8161-3	1976	ALICE	ONT	CAN	45.46	77.17	150	S	2.26	76	96.0	32cm;17m;40y
32.500-7631070.0	S 8161-7	1976	ALICE	ONT	CAN	45.46	77.17	150	S	2.38	76	96.0	46cm;19m;40y
32.500-7631090.0	S 8161-9	1976	ALICE	ONT	CAN	45.46	77.17	150	S	2.14	76	95.0	25cm;12m;25y
32.500-7631110.0	S 8161-11	1976	ALICE	ONT	CAN	45.46	77.17	150	S	2.52	76	92.5	
32.500-7632000.0	S 8163-1	1976	LORRAINE TP.	ONT	CAN	47.15	79.31	240	S	3.30	76	97.0	
32.500-7632200.0	S 8165-1	1976	PECK TP.	ONT	CAN	45.29	78.45	460	S	2.57	76	86.5	
32.500-7632220.0	S 8165-3	1976	PECK TP.	ONT	CAN	45.29	78.45	460	S	2.65	76	80.0	
32.500-7632230.0	S 8165-4	1976	PECK TP.	ONT	CAN	45.29	78.45	460	S	2.28	76	99.5	
32.500-7632240.0	S 8165-5	1976	PECK TP.	ONT	CAN	45.29	78.45	460	S	3.22	76	80.0	
32.500-7632280.0	S 8165-9	1976	PECK TP.	ONT	CAN	45.29	78.45	460	S	2.49	76	91.5	
32.500-7632400.0	S 8167-1	1976	ARMOUR TP.	ONT	CAN	45.37	79.25	300	S	2.09	76	94.5	
32.500-7632410.0	S 8167-2	1976	ARMOUR TP.	ONT	CAN	45.37	79.25	300	S	2.85	76	87.5	
32.500-7632490.0	S 8167-10	1976	ARMOUR TP.	ONT	CAN	45.37	79.25	300	S	2.06	76	90.5	
32.500-7632510.0	S 8168-2	1976	CHISHOLM TP.	ONT	CAN	46.08	79.16	275	S	3.62	76	100.0	
32.500-7632560.0	S 8168-7	1976	CHISHOLM TP.	ONT	CAN	46.08	79.16	275	S	2.65	77	95.5	
32.500-7632570.0	S 8168-8	1976	CHISHOLM TP.	ONT	CAN	46.08	79.16	275	S	3.17	77	75.0	
32.500-7632590.0	S 8168-10	1976	CHISHOLM TP.	ONT	CAN	46.08	79.16	275	S	2.96	77	91.5	
32.500-7632650.0	S 8157-6	1976	MATTAWAN TP.	ONT	CAN	46.23	78.54	305	S	2.11	77	100.0	
32.500-7632680.0	S 8157-9	1976	MATTAWAN TP.	ONT	CAN	46.23	78.54	305	S	2.06	77	98.5	
32.500-7632690.0	S 8157-10	1976	MATTAWAN TP.	ONT	CAN	46.23	78.54	305	S	2.34	77	97.0	
32.500-7633050.0	S 8186-1	1976	BONFIELD TP.	ONT	CAN	46.14	79.08	245	S	2.49	77	98.0	
32.500-7633070.0	S 8186-3	1976	BONFIELD TP.	ONT	CAN	46.14	79.08	245	S	2.31	77	97.5	
32.500-7633080.0	S 8186-4	1976	BONFIELD TP.	ONT	CAN	46.14	79.08	245	S	1.87	77	98.0	
32.500-7633140.0	S 8186-10	1976	BONFIELD TP.	ONT	CAN	46.14	79.08	245	S	2.79	77	99.0	
32.500-7633160.0	S 8187-2	1976	BOWMAN TP.	ONT	CAN	48.29	80.25	290	S	2.43	77	97.0	
32.500-7633170.0	S 8187-3	1976	BOWMAN TP.	ONT	CAN	48.29	80.25	290	S	2.54	77	95.0	
32.500-7633180.0	S 8187-4	1976	BOWMAN TP.	ONT	CAN	48.29	80.25	290	S	2.46	77	99.0	
32.500-7633210.0	S 8187-7	1976	BOWMAN TP.	ONT	CAN	48.29	80.25	290	S	2.32	77	85.0	
32.500-7633220.0	S 8187-8	1976	BOWMAN TP.	ONT	CAN	48.29	80.25	290	S	2.18	77	98.5	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7633570.0		1976	SILVER LAKE	ONT	CAN	44.49	76.41	180	S	2.68	77	87.0	46cm;11m;25-30w
32.500-7633590.0		1976	SILVER LAKE	ONT	CAN	44.49	76.41	180	S	3.17	77	96.5	20cm;6m;18w
32.500-7633640.0	S 8352-2	1976	FORESTER FALLS	ONT	CAN	45.41	76.48	140	S	2.05	77	98.0	39cm;12m;50w
32.500-7633650.0	S 8352-3	1976	FORESTER FALLS	ONT	CAN	45.41	76.48	140	S	2.14	77	99.5	43cm;12m;45w
32.500-7633660.0	S 8352-4	1976	FORESTER FALLS	ONT	CAN	45.41	76.48	140	S	2.06	77	99.5	44cm;15m;45w
32.500-7633670.0	S 8352-5	1976	FORESTER FALLS	ONT	CAN	45.41	76.48	140	S	1.88	77	99.0	
32.500-7633680.0	S 8353-1	1976	FORESTER FALLS	ONT	CAN	45.42	76.49	150	S	3.10	77	84.5	25cm;10m;27w
32.500-7633690.0	S 8353-2	1976	FORESTER FALLS	ONT	CAN	45.42	76.49	150	S	2.90	77	99.0	48cm;15m;60w
32.500-7634460.0		1976	CHALK RIVER, AECL	ONT	CAN	46.01	77.26	145	S	1.94	77	98.5	ST.1865
32.500-7634480.0		1976	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.27	120	S	2.61	77	95.8	
32.500-7655070.0	S 8357	1976	SIPANOK CH.	SASK	CAN	53.40	102.47	272	R	2.33	78	75.8	
32.500-7655110.0	S 8361	1976	CHITEK LK.	SASK	CAN	53.46	107.50	567	R	2.15	78	46.2	
32.500-7655120.0	S 8362	1976	MADGE LK.	SASK	CAN	51.38	101.40	621	R	2.57	78	74.2	
32.500-7655140.0	S 8364	1976	PIWEI R.	SASK	CAN	52.30	102.55	509	R	2.61	78	60.0	
32.500-7655160.0	S 8134-2	1976	CANDLE LK.	SASK	CAN	53.45	105.12	494	R	2.08	78	39.0	
32.500-7655170.0	S 8366	1976	DORE LK.	SASK	CAN	54.42	107.16	485	N/A	2.08	78	39.0	
32.500-7665200.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.79	77	93.0	A.F.S.# 0335
32.500-7665210.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.74	77	94.4	A.F.S.# 0336
32.500-7665220.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.03	77	97.0	A.F.S.# 0337
32.500-7665230.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.01	77	89.5	A.F.S.# 0338
32.500-7665240.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.82	77	62.0	A.F.S.# 0339
32.500-7665250.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.97	77	52.0	A.F.S.# 0340
32.500-7665260.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.08	77	96.0	A.F.S.# 0341
32.500-7665270.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.97	77	89.2	A.F.S.# 0342
32.500-7665280.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.04	77	77.0	A.F.S.# 0343
32.500-7665290.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.60	77	97.3	A.F.S.# 0344
32.500-7665300.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.40	77	95.7	A.F.S.# 0345
32.500-7665310.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.21	77	92.9	A.F.S.# 0346
32.500-7665320.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.86	77	65.0	A.F.S.# 0359
32.500-7665330.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.03	77	80.0	A.F.S.# 0360
32.500-7665340.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.65	77	91.0	A.F.S.# 0361
32.500-7665350.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.42	77	74.6	A.F.S.# 0362
32.500-7665360.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.01	77	90.5	A.F.S.# 0363
32.500-7665370.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.21	77	97.8	A.F.S.# 0364
32.500-7665380.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.11	77	89.5	A.F.S.# 0365
32.500-7665390.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.55	77	54.0	A.F.S.# 0366
32.500-7665400.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.13	77	97.6	A.F.S.# 0367
32.500-7665410.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.89	77	96.8	A.F.S.# 0368
32.500-7665420.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.19	77	80.0	A.F.S.# 0369
32.500-7665430.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.47	77	98.7	A.F.S.# 0370
32.500-7665440.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.85	77	78.0	A.F.S.# 0347
32.500-7665450.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.97	77	57.0	A.F.S.# 0348
32.500-7665460.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.65	77	85.0	A.F.S.# 0349
32.500-7665480.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.38	77	91.0	A.F.S.# 0351
32.500-7665490.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.05	77	74.0	A.F.S.# 0352
32.500-7665510.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.43	77	90.8	A.F.S.# 0354
32.500-7665520.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.13	77	66.0	A.F.S.# 0355
32.500-7665530.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	1.47	77	92.0	A.F.S.# 0356
32.500-7665540.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.48	77	95.9	A.F.S.# 0357

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-7665550.0		1976	PEACE RIVER FOREST	ALTA	CAN	57.18	114.32	549	S	2.12	77	66.7	A.F.S.# 0358
32.500-7730440.0		1977	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	170	S	2.08	83	100.0	
32.500-7730450.0		1977	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	160	S	2.49	78	99.5	
32.500-7730460.0		1977	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	160	B	2.08	83	95.0	
32.500-7730470.0		1977	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	160	S	2.58	83	88.0	
32.500-7730480.0		1977	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	160	S	2.00	83	89.0	
32.500-7730490.0		1977	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	160	S	2.41	83	88.0	
32.500-7730500.0		1977	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	170	S	1.71	83	94.0	
32.500-7730510.0		1977	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	170	B	2.30	83	90.0	
32.500-7730590.0	S 8701-7	1977	DAVMONT TP.	ONT	CAN	46.51	83.58	300	S	2.21	83	100.0	
32.500-7730960.0	S 8705-6	1977	PROCTOR TP.	ONT	CAN	46.20	82.30	250	S	1.69	83	98.0	
32.500-7731060.0	S 8706-9	1977	TP. 131	ONT	CAN	46.28	82.14	365	S	2.01	83	92.0	
32.500-7731100.0	S 8707-3	1977	DENISON TP.	ONT	CAN	46.27	81.22	275	S	2.15	83	99.0	
32.500-7731120.0	S 8707-5	1977	DENISON TP.	ONT	CAN	46.27	81.22	275	S	1.98	78	99.0	
32.500-7731140.0	S 8707-7	1977	DENISON TP.	ONT	CAN	46.27	81.22	275	S	2.00	83	92.0	
32.500-7731150.0	S 8707-8	1977	DENISON TP.	ONT	CAN	46.27	81.22	275	S	1.96	78	100.0	
32.500-7731260.0	S 8021-12	1977	NAIRN TP.	ONT	CAN	46.19	81.39	215	S	2.13	83	99.0	
32.500-7731310.0	S 8021-17	1977	NAIRN TP.	ONT	CAN	46.19	81.39	215	S	2.23	78	99.5	
32.500-7731600.0	S 8710-2	1977	DAHL TP.	ONT	CAN	48.18	85.00	425	S	1.86	83	82.0	
32.500-7731620.0	S 8710-4	1977	DAHL TP.	ONT	CAN	48.18	85.00	425	S	2.51	83	87.0	
32.500-7820730.0	S 8373-3	1978	THORNE TP.	QUE	CAN	45.48	76.28	210	S	2.28	83	99.0	
32.500-7820740.0	S 8373-4	1978	THORNE TP.	QUE	CAN	45.48	76.28	210	S	2.28	83	95.0	
32.500-7820750.0	S 8373-5	1978	THORNE TP.	QUE	CAN	45.48	76.28	210	S	2.98	83	98.0	
32.500-7820760.0	S 8373-6	1978	THORNE TP.	QUE	CAN	45.48	76.28	210	S	2.36	83	99.0	
32.500-7820790.0	S 8373-9	1978	THORNE TP.	QUE	CAN	45.48	76.28	210	S	2.94	83	99.0	
32.500-7820890.0	S 8372-1	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	B	2.28	83	100.0	23-25cm;12-17m
32.500-7820900.0	S 8372-2	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	2.33	83	100.0	
32.500-7820910.0	S 8372-3	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	2.87	83	100.0	
32.500-7820920.0	S 8372-4	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	2.31	83	100.0	
32.500-7820930.0	S 8372-5	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	2.63	83	100.0	
32.500-7820940.0	S 8372-6	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	2.88	83	100.0	
32.500-7820950.0	S 8372-7	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	3.52	83	100.0	
32.500-7820960.0	S 8372-8	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	2.68	83	100.0	
32.500-7820970.0	S 8372-9	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	3.01	83	100.0	
32.500-7820980.0	S 8372-10	1978	OTTER LAKE	QUE	CAN	45.51	76.26	200	S	2.78	83	98.0	
32.500-7830810.0		1978	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	S	2.29	83	100.0	
32.500-7830820.0		1978	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	160	S	2.61	83	97.0	
32.500-7830830.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.25	160	S	2.60	80	98.5	ST.2023
32.500-7830840.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.25	160	S	2.07	80	94.8	ST.2017
32.500-7831460.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.24	160	S	2.13	80	97.0	
32.500-7831470.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.24	160	S	2.30	80	96.0	
32.500-7831570.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.24	160	S	2.67	80	95.5	ST.1863
32.500-7831580.0		1978	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.25	160	S	2.02	80	96.3	ST.2019
32.500-7933030.0	S 8772-1	1979	SOUTH NATION RIVER	ONT	CAN	45.33	75.03	61	S	2.95	**		
32.500-7933060.0	S 8772-4	1979	SOUTH NATION RIVER	ONT	CAN	45.33	75.03	61	S	2.76	83	51.0	
32.500-7933070.0	S 8772-5	1979	SOUTH NATION RIVER	ONT	CAN	45.33	75.03	61	N/A	2.60	**		
32.500-7933080.0	S 8772-6	1979	SOUTH NATION RIVER	ONT	CAN	45.33	75.03	61	N/A	2.75	83	75.0	
32.500-8234400.0		1982	PINE GRAFT ARB, PNFI	ONT	CAN	45.57	77.28	200	S	2.13	83	97.8	50cm;20m;65w
32.500-8234410.0		1982	PINE GRAFT ARB, PNFI	ONT	CAN	45.57	77.28	200	S	1.89	83	92.0	50cm;18m;65w

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.500-8234420.0		1982	PINE GRAFT ARB, PNFI	ONT	CAN	45.57	77.28	200	S	2.05	83	98.3	45cm;16m;55w
32.500-8234430.0		1982	PINE GRAFT ARB, PNFI	ONT	CAN	45.57	77.28	200	S	2.22	83	97.0	25cm;14m;35w
32.500-8234440.0		1982	PINE GRAFT ARB, PNFI	ONT	CAN	45.57	77.28	200	S	2.78	83	93.2	52cm;70w
32.500-8234450.0		1982	PINE GRAFT ARB, PNFI	ONT	CAN	45.57	77.28	200	S	2.36	83	97.0	35cm;16m;55w
32.500-8234460.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	200	S	2.30	83	99.7	18-20m;50-70w
32.500-8234470.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	200	S	2.18	83	99.2	
32.500-8234480.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	200	S	2.33	83	99.7	
32.500-8234490.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	200	S	2.06	83	99.5	
32.500-8234500.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	45.59	77.28	200	S	2.30	83	99.5	
32.500-8284650.0		1982	WASHINGTON COUNTY	ME	USA	44.45	67.15		S	3.53	83	100.0	RECD FROM K. HALF
(32.600) PICEA GLEHNII (Sakhalin spruce)													
32.600-6981720.0		1969	HOKKAIDO PREFECTURE		JPN	43.25	144.06E	615	B	3.34	83	25.5	
(32.800) PICEA KOYAMAE (Koyama spruce)													
32.800-7484360.0		1974	NAGANO PREFECTURE		JPN	35.50	138.13E	1660	S	4.65	83	57.5	39cm;21m;85w
(32.850) PICEA LIKIANGENSIS (Likiang spruce)													
32.850-8283330.0		1982	YUNNAN PROVINCE		CHN	25.00	100.00E		N/A	8.02	83	55.7	
(32.900) PICEA MARIANA (black spruce)													
32.900-5210560.0		1952	GEARY	NB	CAN	45.42	66.31	20	B	1.31	83	79.9	
32.900-5210590.0		1952	FARNINGTON	PEI	CAN	46.23	62.29	20	B	1.28	83	55.0	
32.900-5310520.0		1953	PRINCE WILLIAM STATION	NB	CAN	45.45	67.05	150	B	1.62	83	33.5	
32.900-5310540.0	S 7073	1953	ACADIA FOR. EXP. STA.	NB	CAN	45.59	66.14	45	N/A	1.39	83	56.5	
32.900-5310550.0		1953	CHIGNECTO GAME SANCTUARY	NS	CAN	45.30	64.28	45	B	1.55	83	62.5	
32.900-5910520.0		1959	BIG HOLE BROOK	NB	CAN	46.35	66.15	120	B	1.67	83	34.5	
32.900-6030270.0	S 94-60	1960	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.29	200	N/A	.95	83	61.0	
32.900-6430210.0	S 7095	1964	ONTARIO SITE REGION 4E	ONT	CAN	47.00	80.00		B	1.06	83	100.0	LARGE ZONE
32.900-6430220.0		1964	ONTARIO SITE REGION 3E	ONT	CAN	50.00	80.00		B	1.02	**		LARGE ZONE
32.900-6430230.0		1964	ONTARIO SITE REGION 3W	ONT	CAN	50.00	90.00		B	.97	83	99.5	LARGE ZONE
32.900-6430240.0		1964	ONTARIO SITE REGION 4W	ONT	CAN	49.00	90.00		B	1.04	83	96.5	LARGE ZONE
32.900-6430250.0		1964	ONTARIO SITE REGION 5S	ONT	CAN	50.00	94.00		B	.99	83	99.5	LARGE ZONE
32.900-6430260.0		1964	ONTARIO SITE REGION 4S	ONT	CAN	45.50	77.30		B	1.07	83	98.5	LARGE ZONE
32.900-6480270.0	S 7105	1964	ITASCA COUNTY	MINN	USA	47.22	93.35	410	B(15)	1.25	83	73.0	
32.900-6561040.0		1965	WHITECOURT	ALTA	CAN	54.45	115.43	760	B	1.32	**		
32.900-6730630.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	175	B(3)	1.30	78	96.8	
32.900-6730640.0		1967	RED LAKE	ONT	CAN	50.52	93.39	350	B	.94	78	99.5	
32.900-6732320.0		1967	RANGER LAKE	ONT	CAN	46.46	83.26	365	B	.97	83	80.0	
32.900-6751610.0	S 7107	1967	PORCUPINE MOUNTAIN	SASK	CAN	52.30	101.43	600	B	1.04	83	64.5	
32.900-7031490.0		1970	ALGONQUIN PARK	ONT	CAN	45.50	77.30	230		1.31	84	84.0	
32.900-7031500.0		1970	ALGONQUIN PARK	ONT	CAN				B	1.35	71	97.7	
32.900-7061100.0		1970	FAWCETT LAKE	ALTA	CAN	55.20	113.55	640	B	1.35	83	82.0	12-15m;50-60w
32.900-7433140.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	175	S	.74	81	99.0	
32.900-7433150.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	175	S	1.01	**		18cm;16m

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
32.900-7433160.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	175	S	1.14	**		25cm;22m
32.900-7433170.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	175	S	1.01	**		
32.900-7433180.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	175	S	1.14	**		
32.900-7433210.0		1974	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.25	170	S	.76	**		17cm;21m;67y
32.900-8130010.0		1981	SITE REGION 34	ONT	CAN				N/A	.94	83	100.0	JB1-03;HAND PICKED
32.900-8130040.0		1981	SITE REGION 34	ONT	CAN				N/A	.94	83	90.0	JB1-03;COMB-HARV
32.900-8283280.0		1982	HEARST	ONT	CAN	49.41	83.40		N/A	.94	84	98.0	OLD & NEW CONES
32.900-8310644.0		1983	AUBURN	PEI	CAN	46.17	62.55	30	B(20)	1.41	84	95.5	10-15cm;6-10m;42y
32.900-8310645.0		1983	CARDROSS	PEI	CAN	46.16	62.38	45	B(50)	1.40	84	95.5	15-20cm;12-15m;65y
32.900-8310646.0		1983	HARMONY ROAD	PEI	CAN	46.32	62.01	30	B(50)	1.60	**		10-15cm;5-8m;17yrs
(32.950) PICEA MEYERI													
32.950-7886020.0		1978	SHANSI		CHN	38.50	112.10E	2000	N/A	6.45	84	69.0	
(33.100) PICEA OBOVATA (Siberian spruce)													
33.100-7789410.0		1977	KASHKIR, ASSR		SUN	66.00	124.00E		R	6.12	83	21.5	
(33.200) PICEA OMORIKA (Serbian spruce)													
33.200-7485390.0		1974	WEST GERMANY		DEU				R	3.53	83	58.7	
(33.250) PICEA ORIENTALIS (oriental spruce)													
33.250-0080003.0		1983	TURKEY		TUR				N/A	7.81	84	78.5	VIA VERSEPUY
(33.350) PICEA PUNGENS var. GLAUCA (Colorado blue spruce)													
33.350-6981810.0		1969	VIA SCHUMACHER		USA				N/A	4.39	84	88.0	
33.350-6981820.0		1966	VIA SCHUMACHER		USA				N/A		**		
33.350-7485400.0		1974	STATE OF COLORADO	COLO	USA				B	5.05	83	60.5	
33.350-8285450.0		1982	CLEAR CREEK, SANTA FE	NM	USA	35.30	106.00		N/A	4.46	84	67.0	SUPERIOR XMAS TREE
(33.380) PICEA PURPUREA													
33.380-7886960.0		1978	LI-HSIEN, SZECHUAN PROV		CHN	31.40	102.48E	3200	R	3.67	84	80.0	
(33.400) PICEA RUBENS (red spruce)													
33.400-0020620.0		1956	WINDSOR MILLS	QUE	CAN				N/A	2.98	84	62.0	
33.400-5210500.0		1952	NAPADOGAN	NB	CAN	46.24	66.59		R	3.48	84	20.0	
33.400-5210520.0		1952	SCOTTS BAY	NS	CAN	45.18	64.24		R	2.83	84	27.0	
33.400-5210530.0		1952	COBERRIE	NS	CAN	46.11	65.55		R	2.77	84	16.0	
33.400-5310500.0		1953	UPPER BLACKVILLE	NB	CAN	46.39	65.51	30	R	2.32	84	74.0	
33.400-5310510.0		1953	BOYNE ROAD	NB	CAN	45.33	66.31		B	2.43	83	95.5	
33.400-5620010.0		1956	LAKE EDWARD	QUE	CAN	46.45	72.55	300	R	2.53	83	85.0	
33.400-5620520.0		1956	LAKE EDWARD	QUE	CAN	46.45	72.55	300	R	2.45	83	90.0	
33.400-5620580.0		1956	VALCARTIER FOR EXP STA	QUE	CAN	46.57	71.32	215	N/A	2.41	84	72.5	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
33.400-5910500.0		1959	RENOUS-PLASTER ROCK HWY.	NB	CAN	46.45	66.00		B	2.98	83	49.0	
33.400-6010200.0		1960	TIMBER LAKE	NS	CAN	44.42	64.10	90	B	3.26	83	71.5	
33.400-6110200.0		1961	PROSSER BROOK	NB	CAN	45.45	65.00		B	3.68	83	40.6	
33.400-6210210.0		1962	ACADIA FOR. EXP. STA.	NB	CAN	46.00	66.25		N/A	2.40	83	52.8	
33.400-6210220.0		1962	ACADIA FOR. EXP. STA.	NB	CAN	46.02	66.14		N/A	1.74	83	35.9	
33.400-6230240.0	S 3872	1962	HUDSON PLACE, P.F.E.S.	ONT	CAN	46.00	77.25		N/A	3.65	84	100.0	
33.400-6310250.0		1963	MILLSTREAM LAKE	NB	CAN	47.41	66.05	275	B	1.49	74	94.7	
33.400-6380260.0		1963	ESSEX & CLINTON COUNTY	NY	USA	44.30	73.30		B	4.00	83	56.1	
33.400-6410200.0		1964	GREEN RIVER	NB	CAN	47.36	68.17		B	2.61	74	97.0	
33.400-7023050.0		1970	FOSSAMBAULT	QUE	CAN	46.52	71.37		B	2.86	84	64.0	
33.400-8284660.0		1982	PITTSTON FARM	ME	USA	45.45	69.45		N/A	3.08	83	53.0	RECD FROM K HALE

(33.450) PICEA SCHRENKIANA (Schrenk's spruce)

33.450-7487300.0		1974	PRZEVALSK		SUN	42.20	78.10E	2000	B	8.48	83	77.4	

(33.500) PICEA SITCHENSIS (sitka spruce)

33.500-6680040.0		1966	PACIFIC CO.	WASH	USA	47.00	124.00		B	2.61	83	68.5	
33.500-6881020.0		1968	FORKS	WASH	USA	48.04	124.18	140	S	2.38	7/	90.0	76cm,24m
33.500-6881030.0		1968	HOQUIAM	WASH	USA	47.05	124.03	6	S	2.28	77	83.5	61cm,21m
33.500-6881040.0		1968	NECANICUM	OR	USA	45.49	123.46	50	S	2.28	77	82.5	102cm,37m
33.500-6881140.0		1968	BROOKINGS	OR	USA	42.15	124.23	90	S	2.71	83	67.5	46cm,15m
33.500-7073080.0		1970	WEDENE RIVER	BC	CAN	54.08	128.37	170	B	2.32	83	92.5	39-51m,150-250w+
33.500-7073860.0		1970	USK FERRY	BC	CAN	54.38	128.24	140	B(21)	2.42	78	84.0	22-50m,80-150w
33.500-7073870.0		1970	INVERNESS	BC	CAN	54.12	130.15	30	B(20)	2.48	78	84.5	24-43m,60-250w
33.500-7073880.0		1970	LINK ROAD	BC	CAN	53.30	132.10	90	B	2.40	83	84.9	37-58m,200w+
33.500-7073890.0		1970	SALMON BAY	BC	CAN	50.23	125.57		B	2.34	78	93.5	14-33m,60-120w
33.500-7073900.0		1970	BIG QUALICUM RIVER	BC	CAN	49.23	124.37		B	2.44	83	96.5	19-39m,40-80w
33.500-7073960.0		1970	KITWANGA	BC	CAN	55.10	127.52	670	B(16)	1.99	83	80.0	22-31m,80-120w
33.500-7073970.0		1970	NOEICK,CHUCKWALLA RIVERS	BC	CAN	51.56	126.50	400	B(17)	2.15	83	41.0	27-91m,80-400w
33.500-7073980.0		1970	HOLBERG	BC	CAN	50.36	128.06	120	B	2.14	**		
33.500-7073990.0		1970	DERRICK LAKE	BC	CAN	55.41	128.41	240	B(20)	1.69	83	85.5	29-46m,150-200w
33.500-7074000.0		1970	CRANBERRY RIVER	BC	CAN	55.28	128.14	520	B(16)	1.75	83	92.0	19-41m,100-200w
33.500-7074010.0		1970	FULMAR CREEK	BC	CAN	55.09	128.58	400	B(16)	2.29	83	94.0	37-46m,150w
33.500-7074020.0		1970	CEDARVALE	BC	CAN	55.01	128.19	240	B(16)	2.22	83	93.0	18-37m,100-200w
33.500-7074030.0		1970	PACIFIC	BC	CAN	54.46	128.15	110	S	2.13	83	77.2	64cm,46m,150w
33.500-7083840.0		1970	DUCK CREEK	ALAS	USA	58.22	134.35	30	B(20)	2.65	83	54.3	24-37m,100w
33.500-7083850.0		1970	WARD LAKE	ALAS	USA	55.25	131.42	15	B	2.56	77	80.5	18-64m,50-250w
33.500-7272010.0		1972	QUEEN CHARLOTTE ISLAND	BC	CAN	54.04	131.50	150	B	2.88	83	51.7	
33.500-7272250.0		1972	SOOKE #2 VANCOUVER IS.	BC	CAN	48.22	123.44	10	B	2.10	83	94.0	
33.500-7287290.0		1972	VALDEZ	ALAS	USA	61.07	146.16	90	B(5)	1.70	83	37.2	76-107cm,30-46m
33.500-7575380.0		1975	PARKSVILLE	BC	CAN	49.10	124.30	75	B	2.57	83	72.5	
33.500-8370632.0		1983	KUMDIS CREEK	BC	CAN	53.42	132.09	10	B(3)	2.29	84	95.0	30-50m,100w

(33.700) PICEA WILSONII

33.700-7886940.0		1978	LI-HSIEN,SZECHUAN PROV		CHN	31.40	102.48E	3000	N/A	5.09	84	92.0	

(34.200) PINUS BANKSIANA (jack pine)

34.200-5130010.0	S 1814	1951	BARRY'S BAY	ONT	CAN	45.29	77.41		B	3.70	83	3i.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
34.200-5130020.0	S 1566-51	1951	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	B	3.71	83	46.0	
34.200-5830260.0		1958	LAKE TRAVERSE, ALGON. PK	ONT	CAN	45.57	78.03		N/A	3.90	83	95.0	
34.200-6631610.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.23	160	B(3)	3.78	75	88.5	
34.200-6730610.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.55	77.35	170	B	3.26	75	82.5	
34.200-6730940.0		1967	DEEP RIVER	ONT	CAN	46.06	77.30		S	3.88	75	76.0	
34.200-6730950.0		1967	DEEP RIVER	ONT	CAN	46.06	77.30		S	3.15	75	92.0	
34.200-6730960.0		1967	DEEP RIVER	ONT	CAN	46.06	77.30		S	3.00	82	88.0	
34.200-6730970.0		1967	DEEP RIVER	ONT	CAN	46.06	77.30		S		75	87.5	
34.200-6730980.0		1967	DEEP RIVER	ONT	CAN	46.06	77.30		S	2.64	75	83.0	
34.200-6730990.0		1967	DEEP RIVER	ONT	CAN	46.06	77.30		S	2.70	83	77.0	
34.200-6731770.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.24	170	B	3.30	75	85.0	
34.200-6830070.0		1968	SIOUX LOOKOUT	ONT	CAN	50.09	91.48	380	B	3.24	75	96.0	15-18m,70-80w
34.200-6830070.1		1968	SIOUX LOOKOUT	ONT	CAN	50.09	91.48	380	B	3.33	75	89.0	15-18m,70-80w
34.200-6830080.0		1968	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.18	145	B400	3.25	82	95.5	17-21m,50-60w
34.200-6830080.1		1968	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.18	145	B400	3.25	82	93.4	17-21m,50-60w
34.200-6830090.0		1968	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.18	145	B400	3.40	83	96.0	17-21m,50-60w
34.200-6830090.1		1968	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.18	145	B400	3.20	83	84.0	17-21m,50-60w
34.200-6951610.0		1969	CANDLE LAKE	SASK	CAN	53.50	105.00	490	B	3.28	75	96.5	
34.200-6951740.0		1969	EMMA LAKE	SASK	CAN	53.55	105.50	490	B	3.11	75	74.5	
34.200-7010380.0		1970	GRAND LAKE	NB	CAN	45.57	66.04	30	B(15)	3.52	75	95.0	10-20cm
34.200-7010500.0		1970	SHINNICKBURN	NB	CAN	46.30	66.00	90	B(20)	3.50	75	97.5	11-12m,40-50w
34.200-7010500.1		1970	SHINNICKBURN	NB	CAN	46.30	66.00	90	B(2)	3.52	75	75.5	11-12m,40-50w
34.200-7020460.0		1970	CHURCH TWP.	QUE	CAN	46.16	76.13	240	S	3.60	75	93.0	25cm,10m,40w
34.200-7020460.2		1970	CHURCH TWP.	QUE	CAN	46.16	76.13	240	S	3.68	75	69.5	25cm,9m,40w
34.200-7020470.0		1970	RIVIERE MANICOUAGAN	QUE	CAN	50.10	68.35	335	B(20)	3.18	75	96.5	13cm,11m,50w
34.200-7030320.0		1970	EVELYN TWP.	ONT	CAN	48.40	81.00	300	B(33)	3.53	75	88.0	FIRST KILN
34.200-7030320.1		1970	EVELYN TWP.	ONT	CAN	48.40	81.00	300	B(33)	3.65	75	86.0	SECOND KILN
34.200-7030330.0		1970	GREENLAW TWP.	ONT	CAN	47.40	82.47	410	B(5)	3.28	75	84.0	15-18m,80-90w
34.200-7030330.1		1970	GREENLAW TWP.	ONT	CAN	47.40	82.47	410	B(5)	3.32	75	51.5	15-18m,80-90w
34.200-7030340.0		1970	BAIN TWP.	ONT	CAN	49.52	86.24	320	B	3.36	75	87.0	FIRST KILN
34.200-7030340.1		1970	BAIN TWP.	ONT	CAN	49.52	86.24	320	B	3.37	75	53.5	SECOND KILN
34.200-7030350.0		1970	NIPIGON	ONT	CAN	49.11	88.12	275	S	3.30	75	90.5	10m,30w
34.200-7030350.1		1970	NIPIGON	ONT	CAN	49.11	88.12	275	B	3.50	75	66.5	SECOND KILN
34.200-7030370.0		1970	CLEARWATER BAY	ONT	CAN	49.44	94.49	400	B(3)	2.94	75	95.5	7-11m,65-98w
34.200-7030370.1		1970	CLEARWATER BAY	ONT	CAN	49.44	94.49	400	B(3)	3.04	75	96.0	SECOND KILN
34.200-7030430.0		1970	QUETICO PROV. PARK	ONT	CAN	48.39	92.14	400	B(20)	3.25	75	97.5	20-28cm,21-23m,78w
34.200-7030430.1		1970	QUETICO PROV. PARK	ONT	CAN	48.39	92.14	400	B(20)	3.17	75	72.0	SECOND KILN
34.200-7030450.0		1970	GIBI LAKE	ONT	CAN	49.38	94.12	370	B(5)	3.03	75	97.5	19-24m,91-103w
34.200-7030450.1		1970	GIBI LAKE	ONT	CAN	49.38	94.12	370	B(5)	3.01	75	85.0	SECOND KILN
34.200-7031800.0	S 7486	1970	C.F.B. PETAWAWA	ONT	CAN	46.00	77.19	150	B	3.37	81	98.0	
34.200-7040360.0		1970	LAKE ST MARTIN	MAN	CAN	51.30	98.20	335	B(7)	3.41	75	77.5	20-21m,65-80w
34.200-7040360.1		1970	LAKE ST MARTIN	MAN	CAN	51.30	98.20	335	B(7)	3.26	75	61.5	SECOND KILN
34.200-7040410.0		1970	FLIN FLON	MAN	CAN	54.40	101.47	550	B(2)	3.91	75	93.0	15-19m,49-72w
34.200-7040410.1		1970	FLIN FLON	MAN	CAN	54.40	101.47	550	B(2)	3.89	75	85.5	SECOND KILN
34.200-7040420.0		1970	BELL LAKE	MAN	CAN	52.32	101.09	670	S	3.97	75	94.0	18-21m,60-80w
34.200-7040420.1		1970	BELL LAKE	MAN	CAN	52.32	101.09	670	S	3.86	75	50.0	SECOND KILN
34.200-7050390.0		1970	LAC LA RONGE	SASK	CAN	55.12	105.18	370	B(5)	2.94	75	84.0	19-22m,81-85w
34.200-7050390.1		1970	LAC LA RONGE	SASK	CAN	55.12	105.18	370	B(5)	2.93	75	80.0	SECOND KILN
34.200-7050400.0		1970	BIG RIVER	SASK	CAN	53.44	107.12	490	B(7)	4.02	75	88.5	10-12m,47-50w

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
34.200-7050400.1		1970	BIG RIVER	SASK	CAN	53.44	107.12	490	B(7)	4.16	75	70.5	SECOND KILN
34.200-7130320.0		1971	NIMITZ TWP. CHAPLEAU	ONT	CAN	47.40	83.10	460	B	3.16	79	61.5	
34.200-7130330.0		1971	C.F.B. PETAWAWA	ONT	CAN	45.59	77.21	145	B(50	3.50	75	95.0	15-30cm;15-18m
34.200-7257430.0		1972	MONTREAL LAKE	SASK	CAN	54.16	105.37	560	N/A	3.31	84	55.0	
34.200-7257450.0		1972	CANDLE LAKE	SASK	CAN	53.45	105.15		N/A	3.32	84	24.0	
34.200-7257460.0		1972	CHRISTOPHER LAKE	SASK	CAN	53.34	105.40		N/A	3.86	84	56.0	
34.200-7330060.0		1973	C.F.B. PETAWAWA	ONT	CAN	45.57	77.22	150	B	3.50	83	97.0	FIRST KILN
34.200-7330060.1		1973	C.F.B. PETAWAWA	ONT	CAN	45.57	77.22	150	B	3.27	75	93.5	SECOND KILN
34.200-7331420.0		1973	WELLS TWP.	ONT	CAN	46.26	83.23	220	B(25)	3.09	75	97.7	15-21m;60+y
34.200-7333410.0		1973	AUDREY LAKE	ONT	CAN	49.45	94.10	460	B*	3.02	74	94.7	*(120);20-41cm
34.200-7333680.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.22	150	S	3.60	75	98.0	
34.200-7333690.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.22	150	S	3.37	75	98.5	
34.200-7333700.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.22	152	S	3.00	83	93.0	
34.200-7333710.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.22	150	S	3.08	75	89.0	
34.200-7333720.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.22	150	S	3.33	75	99.5	
34.200-7333730.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.22	150	S	3.43	75	92.0	
34.200-7350080.0		1973	LA LOCHE	SASK	CAN	56.22	109.12	520	B(6)	3.39	79	67.5	
34.200-7350090.0		1973	MEADOW LAKE	SASK	CAN	54.54	108.27	725	B	3.30	75	87.5	
34.200-7350100.0		1973	MONTREAL LAKE	SASK	CAN	54.16	105.37	560	B(7)	3.36	75	92.0	
34.200-7350110.0		1973	SOUTHEND	SASK	CAN	56.16	103.20	440	B(8)	2.87	75	89.5	
34.200-7350120.0		1973	PRINCE ALBERT	SASK	CAN	53.14	105.47	560	B(8)	3.88	75	87.0	
34.200-7350130.0		1973	HUDSON BAY	SASK	CAN	52.50	102.21	410	B(5)	3.95	75	82.0	
34.200-7350140.0		1973	LA RONGE	SASK	CAN	55.27	104.52	415	B(7)	2.81	75	85.5	
34.200-7435330.0		1974	SWASTIKA	ONT	CAN	47.30	80.00		N/A	3.40	83	99.0	
34.200-7530200.0		1975	C.F.B. PETAWAWA	ONT	CAN	45.55	77.29	160	N/A	3.50	83	79.0	
34.200-7630000.0		1976	BRUCE PENINSULA	ONT	CAN	45.11	80.32	200	N/A	3.00	**		
34.200-7827550.0		1978	POINTE A DAVID	QUE	CAN	46.45	75.55	244	N/A	4.70	84	96.5	
34.200-7836330.0		1978	HAWK LAKE	ONT	CAN	49.45	93.57	460	B	3.08	79	95.8	14-18m;75-100y
34.200-7836340.0		1978	WELLS TWP.	ONT	CAN	46.25	83.21	230	B	3.29	79	95.3	
34.200-7836350.0	S 9719	1978	GARIBALDI TWP. S.P.A.	ONT	CAN	47.14	81.14	380	B	3.17	79	96.8	
34.200-7931650.0		1979	C.F.B. PETAWAWA	ONT	CAN	45.57	77.22	160	B	3.50	79	79.8	
34.200-8021950.0		1980	BRIAND	QUE	CAN	46.54	76.02		S	3.90	84	92.5	15cm;14m;40y
34.200-8121300.0		1981	JOLIETTE COUNTY	QUE	CAN	47.25	75.20	365	S	3.56	84	87.5	18cm;16m;45y
34.200-8130900.0		1981	C.F.B. PETAWAWA	ONT	CAN	45.59	75.23	150	B	3.70	82	99.0	

(34.280) PINUS CARIBAEA VAR CARIBAEA

34.280-7886740.0		1978	MARRAJITAS PINAR DEL RIO		CUB	22.00	84.00		B	14.40	83	45.0	

(34.410) PINUS CONTORTA var. CONTORTA (shore pine)

34.410-7073220.0		1970	RICHMOND	BC	CAN	49.10	123.10	35	B	2.67	75	93.5	
34.410-7272070.0		1972	TERRACE	BC	CAN	54.52	128.47	150	B	2.49	76	74.0	NO KILN
34.410-7272070.1		1972	TERRACE	BC	CAN	54.52	128.47	150	B	2.37	76	74.5	KILN

(34.430) PINUS CONTORTA var. LATIFOLIA (lodgepole pine)

34.430-5850250.0		1958	CYPRESS HILLS PROV. PARK	SASK	CAN	49.40	109.30	1220	B	5.89	83	28.0	
34.430-5960610.0		1959	ALLISON CREEK	BC	CAN	49.30	120.30		N/A	3.56	83	74.0	CROW NEST'S PASS

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
34.430-5970620.0		1959	WHITEHORSE	YT	CAN	60.43	135.03		N/A	3.11	88		
34.430-6081120.0		1960	PRAIRIE CITY	OR	USA	44.32	118.34	1500	S	4.50	83	97.0	30cm;15m
34.430-7060480.0		1970	HINTON	ALTA	CAN	53.14	117.26	1480	B	3.48	72	93.8	20-38cm;12-18m
34.430-7060490.0		1970	KANANASKIS RES. FOREST	ALTA	CAN	51.00	115.00	1370	B	4.43	75	86.5	FIRST KILN
34.430-7060490.1		1970	KANANASKIS RES. FOREST	ALTA	CAN	51.00	115.00	1370	B	4.37	75	63.5	SECOND KILN
34.430-7160350.0		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	B(5)	3.39	83	89.0	25-29m;123-145w
34.430-7160350.1		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	B(5)	3.30	72	91.0	SECOND KILN
34.430-7160360.0		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	N/A	3.37	75	89.5	FIRST KILN
34.430-7160360.1		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	N/A	3.41	75	92.8	SECOND KILN
34.430-7160370.0		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	N/A	2.80	75	95.0	FIRST KILN
34.430-7160370.1		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	N/A	2.82	75	91.5	SECOND KILN
34.430-7160380.0		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	N/A	3.73	75	97.5	FIRST KILN
34.430-7160380.1		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	N/A	3.81	75	83.5	SECOND KILN
34.430-7160390.0		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	N/A	5.08	75	98.5	FIRST KILN
34.430-7160390.1		1971	SWAN HILLS	ALTA	CAN	54.34	115.29	950	B	5.10	75	81.0	SECOND KILN
34.430-7172000.0		1971	FORT ST. JAMES	BC	CAN	54.30	124.15	840	B	2.79	75	93.3	
34.430-7172010.0		1971	JACOBIE CREEK	BC	CAN	52.32	121.53	990	B	3.16	75	85.5	
34.430-7172020.0		1971	LAC LE JEUNE	BC	CAN	50.30	120.36	1300	B	3.87	75	77.5	
34.430-7172030.0		1971	HAZELTON	BC	CAN	55.15	127.30	530	B	2.74	75	74.0	
34.430-7172130.0		1971	CLEARWATER	BC	CAN	51.40	119.56	530	B	3.48	76	92.5	
34.430-7172140.0		1971	HUDSON HOPE	BC	CAN	56.03	121.52	530	B	3.12	76	95.2	
34.430-7186150.0		1971	LA VETA	COLO	USA	37.35	105.13	3000	B(20)	5.20	83	86.0	10-40cm;10-25m
34.430-7267340.0		1972	NORDEGG	ALTA	CAN	52.30	116.15	1375	B	3.90	76	84.0	
34.430-7272040.0		1972	HAZELTON	BC	CAN	55.10	127.47	370	B	2.70	76	71.8	FIRST KILN
34.430-7272040.1		1972	HAZELTON	BC	CAN	55.10	127.47	370	B	2.70	76	56.5	SECOND KILN
34.430-7272050.0		1972	MANSON CREEK	BC	CAN	55.40	124.30	730	B	2.58	76	88.5	FIRST KILN
34.430-7272050.1		1972	MANSON CREEK	BC	CAN	55.40	124.30	730	B	2.76	76	57.0	SECOND KILN
34.430-7272060.0		1972	JACOBIE CREEK	BC	CAN	52.32	121.50	910	B	3.05	76	71.5	FIRST KILN
34.430-7272060.1		1972	JACOBIE CREEK	BC	CAN	52.32	121.50	910	B	3.02	83	89.5	SECOND KILN
34.430-7272280.0		1972	MILE 101 ALASKA HIGHWAY	BC	CAN	56.45	121.44	880	B	3.27	76	80.5	
34.430-7272290.0		1972	ATLIN	BC	CAN	59.35	133.40	750	B	2.72	76	85.5	
34.430-7272300.0		1972	TAGISH LAKE	YT	CAN	60.14	134.24	780	B	2.67	76	73.0	
34.430-7477340.0		1974	FALKLAND	BC	CAN	50.31	119.40	1300	B	2.67	76	73.0	
34.430-7477350.0		1974	UPPER LIARD RIVER	YT	CAN	60.10	128.50	700	B		76	81.3	
34.430-7575390.0		1975	PINETAN	BC	CAN	50.43	119.57	1100	B		77	86.8	
34.430-7575410.0		1975	WATSON LAKE	YT	CAN	60.10	128.50	725	B	2.90	77	92.3	
34.430-7665180.0		1976	GRANDE PRAIRIE FOREST	ALTA	CAN	55.10	118.48		B	3.46	83	95.0	FIRST KILN
34.430-7665180.1		1976	GRANDE PRAIRIE FOREST	ALTA	CAN	55.10	118.48		B	3.40	83	91.0	SECOND KILN
34.430-7678420.0		1976	MOBERLY LAKE	BC	CAN	55.40	121.25	750	B	3.00	77	90.0	
34.430-7678430.0		1976	FRASER LAKE	BC	CAN	54.12	124.26	850	B	2.90	77	92.2	
34.430-7678440.0		1976	BABINE LAKE	BC	CAN	54.24	125.30	1000	B	2.60	77	84.8	
34.430-7678450.0		1976	BABINE	BC	CAN	55.00	126.35	820	B	3.20	78	96.0	
34.430-7678460.0		1976	WONOWON	BC	CAN	56.43	121.50	950	B	3.30	78	95.5	
34.430-7678470.0		1976	BALDY HUGHES	BC	CAN	53.40	122.57	820	B	2.90	78	93.5	
34.430-7678480.0		1976	PEMENT LAKE	BC	CAN	50.40	119.29	1100	B	3.00	78	78.5	
34.430-7769720.0		1977	NORDEGG	ALTA	CAN	52.30	116.15	1375	B	4.00	78	84.0	
34.430-7779430.0		1977	NORTH RANCHERIA	YT	CAN	60.06	129.35	1008	B	2.70	83	100.0	
34.430-7779470.0		1977	TAGISH LAKE	YT	CAN	60.14	134.24	777	B	2.70	78	77.2	
34.430-7779480.0		1977	CHETWYND	BC	CAN	55.37	121.40	850	B	3.20	78	85.8	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
34.430-7779490.0		1977	WONOWON	BC	CAN	56.45	121.44	884	R	3.30	79	96.5	
34.430-7779500.0		1977	VALEMOUNT	BC	CAN	52.50	119.13	850	B	3.10	78	96.0	
34.430-7779510.0		1977	TELKWA	BC	CAN	54.37	127.03	780	R	3.10	78	97.0	
34.430-7779520.0		1977	WONOWON	BC	CAN	56.43	121.50	950	R	3.30	78	94.2	
34.430-7779530.0		1977	CANOL ROAD	YT	CAN	61.08	132.50	900	R	3.30	83	69.0	
34.430-7779540.0		1977	TESLIN	YT	CAN	60.18	132.45	700	B	3.10	78	89.8	
34.430-7779550.0		1977	CASSIAR	BC	CAN	56.02	129.00	780	R	3.40	78	95.5	
34.430-7779560.0		1977	BALDY HUGHES	BC	CAN	53.40	122.57	820	R	2.90	78	89.5	
34.430-7779570.0		1977	WILLISTON	BC	CAN	56.00	122.10	815	R	3.10	78	90.0	
34.430-7779580.0		1977	SQUANGA	YT	CAN	60.30	133.45	853	R	3.00	78	70.0	
34.430-7779590.0		1977	QUIET LAKE	YT	CAN	60.55	133.00	900	R	2.90	78	74.5	
34.430-7779600.0		1977	CARMACKS	YT	CAN	62.08	135.15	620	R	2.80	78	84.5	
34.430-7779610.0		1977	SIMPSON LAKE	YT	CAN	60.45	129.10	760	R	3.10	78	82.0	
34.430-7779620.0		1977	TAGISH	YT	CAN	60.20	134.30	850	R	3.10	78	82.7	
34.430-7779630.0		1977	SINKUT MOUNTAIN	BC	CAN	53.50	123.48	910	R	2.90	78	93.2	
34.430-7779640.0		1977	NATION RIVER	BC	CAN	55.15	124.10	950	R	2.80	78	83.8	
34.430-7779650.0		1977	FORT ST. JAMES	BC	CAN	54.30	124.10	900	R	2.90	83	85.0	
34.430-7779660.0		1977	PRINCE GEORGE	BC	CAN	54.08	122.15	775	R	3.00	78	93.8	
34.430-7779670.0		1977	UPPER LIARD RIVER	YT	CAN	60.10	128.50	700	R	3.10	78	83.0	
34.430-7779680.0		1977	TESLIN	YT	CAN	60.15	132.50	750	R	3.00	83	81.0	
34.430-7779690.0		1977	MACKENZIE	BC	CAN	55.20	123.05	775	R	2.80	78	68.8	
34.430-7779700.0		1977	BABINE LAKE	BC	CAN	54.24	125.30	1000	R	2.50	83	92.0	
34.430-7779710.0		1977	MOBERLY LAKE	BC	CAN	55.40	121.25	750	R	3.20	83	88.0	
34.430-7779730.0		1977	MUSKEG LAKE	BC	CAN	55.20	120.43	1000	R	3.20	79	85.3	
34.430-7779740.0		1977	PINK MOUNTAIN	BC	CAN	57.00	122.40	1050	B	3.30	79	88.3	
34.430-7877130.0		1978	LONG LAKE	YT	CAN	60.49	135.06	701	R	3.10	79	94.0	
34.430-7877150.0		1978	SQUANGA	YT	CAN	60.30	134.45	853	R	2.80	83	76.0	
34.430-7877160.0		1978	TAGISH	YT	CAN	60.20	134.30	850	R	3.10	83	77.0	
34.430-7877170.0		1978	CARMACKS	YT	CAN	62.08	135.15	620	B	3.00	79	89.8	
34.430-7877180.0		1978	BOYA LAKE	BC	CAN	59.30	129.00	780	R	3.10	79	96.2	
34.430-7877190.0		1978	TESLIN	YT	CAN	60.18	132.45	700	R	3.00	83	77.0	
34.430-7974030.0		1979	ANNIE LAKE	YT	CAN	60.25	134.50	800	R	3.00	79	89.5	
(34.440) PINUS CONTORTA var. MURRAYANA													
34.440-6881130.0		1968	CAMP NELSON	CAL	USA	36.06	118.32	2160	S	5.90	83	47.0	91cm;30m
(34.500) PINUS DENSIFLORA (Japanese red pine)													
34.500-7383200.0		1973	IWATE PREFECTURE		JPN	39.40	141.10E	205	R	11.20	84	80.0	8-12cm;3-4m;16y
(34.553) PINUS ELLIOTTI (slash pine)													
34.553-7581510.0		1975	GEORGIA	GA	USA				N/A	38.39	84	68.0	
(34.600) PINUS FLEXILIS [limber (Rocky Mountain white) pine]													
34.600-7674490.0		1976	GOLDEN	BC	CAN	51.19	116.52	1130	R	110.80	83	19.0	25-51cm;6-12m
(34.650) PINUS HALEPENSIS (Aleppo pine)													
34.650-7880670.0		1978	PISHIN (QUETTA)		PAK	30.15	67.00E	5000	N/A	62.10	83	84.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
(34.700) PINUS KORAIENSIS (Korean pine)													
34.700-7789280.0		1977	VJAZEMSK		SUN	47.15	134.35E	100	B	485.00	**		
34.700-8081220.0		1978	HEILONGJIANG P MANCHURIA		CHN	48.00	125.00E		N/A	413.20	**		
34.700-8081920.0		1980	DAILING, HEILONGJIANG		CHN	47.00	127.00E	800	N/A	464.00	84	5.3	
(34.900) PINUS MONTICOLA [western white (silver) pine]													
34.900-7071810.0		1970	ADAMS LAKE	BC	CAN	51.25	119.30	550	B	11.66	85	52.0	
34.900-7473900.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	B		**		30-38cm;9-12m;20w
34.900-7473910.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	S		**		
34.900-7473920.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.51	580	S		**		
34.900-7473930.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	S		**		
34.900-7473940.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	S		**		
34.900-7473950.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	S		**		
34.900-7473960.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	S	17.40	**		
34.900-7473970.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	S	18.10	83	49.0	
34.900-7473980.0		1974	VANCOUVER ISLAND	BC	CAN	48.43	123.52	580	S		**		
34.900-7473990.0		1974	MANNING PROV. PARK	BC	CAN	49.10	120.54	1130	S		**		23cm;12m;20w
34.900-7474000.0		1974	MANNING PROV. PARK	BC	CAN	49.10	120.54	1130	S		**		
34.900-7474010.0		1974	MANNING PROV. PARK	BC	CAN	49.10	120.54	1130	S		**		
34.900-7474020.0		1974	MANNING PROV. PARK	BC	CAN	49.10	120.54	1130	S		**		
34.900-7474030.0		1974	MANNING PROV. PARK	BC	CAN	49.10	120.54	1130	S		**		
34.900-7474040.0		1974	MANNING PROV. PARK	BC	CAN	49.10	120.54	1130	S		**		
34.900-7474070.0		1974	ROGER'S PASS	BC	CAN	51.30	117.18	1080	S		**		
34.900-7474080.0		1974	ROGER'S PASS	BC	CAN	51.30	117.18	1080	S		**		
34.900-7474090.0		1974	ROGER'S PASS	BC	CAN	51.30	117.18	1080	S		**		
34.900-7474120.0		1974	ROGER'S PASS	BC	CAN	51.30	117.18	1080	S		**		
34.900-7477320.0		1974	ADAMS LAKE	BC	CAN	51.25	119.30	700	B	15.80	83	16.0	
34.900-7679320.0		1976	WEST ADAMS	BC	CAN	50.53	119.46	686	N/A	17.11	84	56.0	
34.900-8370630.0		1983	ADAMS LAKE	BC	CAN	51.30	119.33	1050	N/A	14.10	84	11.0	
(35.200) PINUS NIGRA (Austrian pine)													
35.200-7485410.0		1974	AUSTRIA		AUT				B	18.96	84	100.0	
35.200-8330037.0		1983	SHERWOOD PARK, TORONTO	ONT	CAN	43.43	79.23	150	S	30.66	84	54.0	PLANTED EXOTIC
(35.230) PINUS NIGRA var. BANATICA													
35.230-7485340.0		1974	BAILE HERCULANE		ROM	44.50	22.30E	675	B	19.28	76	91.0	
(35.235) PINUS NIGRA var. KOEKELARE													
35.235-8181290.0		1981	HALLE #504H SEED ORCHARD		BEL	50.44	4.14E		N/A	19.28	84	68.0	VIA DR. NANSON
(35.260) PINUS OOCARPA													
35.260-7789310.0		1977	TEMASCALTEPEC-TEJUPILCO		MEX	18.57	100.05	1675	B	24.20	83	88.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
35.260-7789320.0		1977	TLAPACOYAN VER.		MEX	17.03	99.58	1250	R	21.60	83	90.0	

(35.400) PINUS PARVIFLORA (Japanese white pine)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
35.400-7383210.0		1973	NAGANO PREFECTURE		JPN	35.52	137.40E	900	S	114.86	**		35cm;10m;35w

(35.600) PINUS PONDEROSA [ponderosa (western yellow) pine]

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
35.600-7171920.0		1971	FALKLAND	BC	CAN	50.30	119.33	685	R	49.27	83	85.0	
35.600-7172100.0		1971	PRITCHARD #1	BC	CAN	50.46	119.47	490	R	51.64	83	92.0	
35.600-7172110.0		1971	PRITCHARD #2	BC	CAN	50.46	119.47	655	R	45.94	83	69.0	
35.600-7172120.0		1971	PRITCHARD #3	BC	CAN	50.46	119.47	840	B	50.50	83	84.0	
35.600-7679150.0		1976	FALKLAND	BC	CAN	50.30	119.33	685	N/A	46.89	83	51.0	

(35.900) PINUS RESINOSA [red (Norway) pine]

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
35.900-5330590.0		1953	STURGEON FALLS	ONT	CAN	46.22	79.55		N/A	8.62	83	31.0	
35.900-5780350.0		1957	DELTA COUNTY	MICH	USA	46.00	87.00		N/A	8.57	83	92.0	
35.900-6030280.0	S 106-60	1960	CENTRE LAKE PARK, PFES	ONT	CAN	45.57	77.30	200	N/A	8.40	83	94.0	
35.900-6630490.0		1966	C.F.R. PETAWAWA	ONT	CAN	46.01	77.21	175	R	9.61	79	92.6	
35.900-6632340.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.36	77.33		B	8.30	83	78.0	
35.900-6632360.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	N/A	9.35	83	55.0	
35.900-6720900.0		1967	SOREL	QUE	CAN	46.02	73.07		B		**		
35.900-6730620.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.30	190	R	9.99	79	84.7	
35.900-6830060.0		1968	SIOUX LOOKOUT	ONT	CAN	50.04	91.57	370	R	7.17	79	86.3	18-21m;140-150w
35.900-6930240.0		1969	DRIFTWOOD PROV. PARK	ONT	CAN	46.11	77.51	170	R	8.47	79	93.8	
35.900-6931500.0		1969	HIGHVIEW	ONT	CAN	45.58	77.19	120	B	8.90	83	100.0	FIRST KILN
35.900-6931510.0		1969	HIGHVIEW	ONT	CAN	45.58	77.19	120	R	8.50	83	100.0	FIRST KILN
35.900-6931510.2		1969	HIGHVIEW	ONT	CAN	45.58	77.19	120	R	8.60	83	100.0	THIRD KILN
35.900-6931520.0		1969	HIGHVIEW	ONT	CAN	45.58	77.19	120	R	8.60	83	88.0	FIRST KILN
35.900-6931530.2		1969	HIGHVIEW	ONT	CAN	45.58	77.19	120	R	8.00	84	48.0	THIRD KILN
35.900-6931540.0		1969	C.F.R. PETAWAWA	ONT	CAN	45.58	77.19	120	B	9.45	79	98.2	FIRST KILN
35.900-6931540.2		1969	C.F.R. PETAWAWA	ONT	CAN	45.58	77.19	120	R	8.10	83	100.0	THIRD KILN
35.900-6931550.0		1969	C.F.R. PETAWAWA	ONT	CAN	45.58	77.19	120	B	8.95	79	99.8	FIRST KILN
35.900-6931550.2		1969	C.F.R. PETAWAWA	ONT	CAN	45.58	77.19	120	R	8.70	83	97.0	THIRD KILN
35.900-6931560.0		1969	C.F.R. PETAWAWA	ONT	CAN	45.58	77.19	120	B	9.00	79	97.7	FIRST KILN
35.900-6931560.2		1969	C.F.R. PETAWAWA	ONT	CAN	45.58	77.19	120	R	8.50	83	55.0	THIRD KILN
35.900-6931570.0		1969	C.F.R. PETAWAWA	ONT	CAN	45.58	77.19	120	R	8.55	79	99.6	FIRST KILN
35.900-6931580.1		1969	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.34	210	R	9.30	83	88.0	SECOND KILN
35.900-6931580.2		1969	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.34	210	B	9.40	83	100.0	THIRD KILN
35.900-6931590.0		1969	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.34	210	R	8.50	79	99.8	FIRST KILN
35.900-7010280.0		1970	BEAVER LAKE	NS	CAN	44.14	65.20	140	B(10)	7.58	76	98.0	15-30cm;9m;20-30w
35.900-7010310.0		1970	TRACY	NB	CAN	45.43	66.42	60	R(5)	8.40	83	100.0	1st KILN;15-38cm
35.900-7023040.0		1970	NORWAY BAY	QUE	CAN	45.32	76.26	80	B	8.45	76	98.0	
35.900-7030150.0		1970	ALICE	ONT	CAN	45.45	77.19	150	R	8.91	79	100.0	
35.900-7030170.0		1970	C.F.R. PETAWAWA	ONT	CAN	45.59	77.22	140	S	10.77	76	99.0	FIRST KILN
35.900-7030180.0		1970	C.F.R. PETAWAWA	ONT	CAN	46.00	77.19	150	S	8.52	76	100.0	FIRST KILN
35.900-7030190.0		1970	C.F.R. PETAWAWA	ONT	CAN	45.59	77.22	140	S	9.36	76	98.5	FIRST KILN
35.900-7030200.0		1970	A.F.C.I.	ONT	CAN	46.01	77.21	180	R(5)	9.62	76	98.0	FIRST KILN

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
35.900-7030210.0		1970	DRIFTWOOD PROV. PARK	ONT	CAN	46.11	77.51	150	S	9.27	76	99.5	FIRST KILN
35.900-7030220.0		1970	DRIFTWOOD PROV. PARK	ONT	CAN	46.11	77.51	150	S	7.55	76	98.5	FIRST KILN
35.900-7030230.0		1970	DRIFTWOOD PROV. PARK	ONT	CAN	46.11	77.51	150	B(3)	8.10	76	99.5	FIRST KILN
35.900-7030240.0		1970	DRIFTWOOD PROV. PARK	ONT	CAN	46.11	77.51	150	S	8.80	83	100.0	FIRST KILN
35.900-7030250.0		1970	ELDRIDGE TWP.	ONT	CAN	47.00	79.30	310	B	7.77	77	99.5	21-29m,185w
35.900-7030260.0		1970	MACDIARMID	ONT	CAN	49.18	88.05	370	B	8.00	79	98.3	1stKL,25-51cm,105w
35.900-7030270.0		1970	AGAWA BAY	ONT	CAN	47.20	84.38	210	B(5)	8.38	76	98.5	10-15m,40-70w
35.900-7030290.0		1970	ATIKOKAN	ONT	CAN	48.58	91.47	410	B(30)	8.80	83	97.0	27-31m,85-95w
35.900-7030300.0		1970	FRENCH LAKE	ONT	CAN	48.41	91.47	440	B(45)	8.73	76	99.0	38-40m,200-250w
35.900-7033910.0		1970	STONECLIFFE	ONT	CAN	46.12	77.58	210	B	7.65	79	73.5	
35.900-7033920.0		1970	STONECLIFFE	ONT	CAN	46.12	77.58	210	N/A	7.61	79	78.3	
35.900-7232200.0		1972	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	S	9.10	83	98.0	FIRST EXTRACTION
35.900-7232210.0		1972	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	S	8.10	76	99.0	FIRST EXTRACTION
35.900-7232220.0		1972	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	B(3)	9.60	83	100.0	FIRST EXTRACTION
35.900-7232230.1		1972	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	B(3)	8.85	76	95.0	SECOND EXTRACTION
35.900-7331380.0		1973	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	B(3)	7.57	76	98.5	ST.2951
35.900-7331390.0		1973	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	S	7.81	76	98.0	
35.900-7331400.0		1973	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	S	8.07	76	98.0	
35.900-7331410.0		1973	C.F.B. PETAWAWA	ONT	CAN	45.58	77.19	120	S	8.40	76	97.0	
35.900-7934010.0		1979	DEEP RIVER	ONT	CAN	46.06	77.29	140	B	9.16	84	94.0	
35.900-8031770.0		1980	DEEP RIVER	ONT	CAN	46.06	77.29	140	B	9.90	83	84.0	

(36.100) PINUS RIGIDA (pitch pine)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.100-7235660.0		1972	MORTON	ONT	CAN	44.30	76.10	110	B	7.98	84	93.0	
36.100-7235670.0		1972	MORTON	ONT	CAN	44.30	76.10	110	B(40)	8.94	84	96.0	
36.100-7383310.0		1973	ADIRONDACK MOUNTAINS	NY	USA	44.00	74.00		B	8.90	83	70.0	
36.100-7434940.0		1974	MORTON	ONT	CAN	44.30	76.10	110	B		84	86.0	

(36.150) PINUS ROXBURGHII

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.150-7880660.0		1978	GHORA GALI		PAK	33.55	73.32F	1200	N/A	94.80	84	95.0	

(36.200) PINUS STROBUS [eastern white (Weymouth) pine]

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.200-6630210.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	150	S	15.10	82	17.9	76cm,26-28m,175w
36.200-6630220.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	150	S	15.79	80	86.5	65cm,29-31m
36.200-6630230.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	150	S	14.13	76	94.5	33cm,21-23m,113w
36.200-6630240.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.27	150	S	19.72	76	97.5	84cm,27-31m
36.200-6630250.0		1966	C.F.B. PETAWAWA	ONT	CAN	45.55	77.29	170	S	17.13	76	92.0	29cm,22m,82w
36.200-6630270.0		1966	C.F.B. PETAWAWA	ONT	CAN	45.55	77.29	170	S	12.93	76	97.0	52cm,26m,106w
36.200-6630280.0		1966	C.F.B. PETAWAWA	ONT	CAN	45.55	77.29	170	S	17.41	82	98.1	44cm,24m,80w
36.200-6630290.0		1966	C.F.B. PETAWAWA	ONT	CAN	45.55	77.29	170	N/A	14.75	76	79.0	
36.200-6630330.0		1966	C.F.B. PETAWAWA	ONT	CAN	45.55	77.29	170	S	16.10	83	64.0	60cm,26m,81w
36.200-6630370.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S	20.98	72	96.2	42cm,20m,133w
36.200-6630420.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S	19.12	**		34cm,24m,80w
36.200-6630430.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S	17.54	83	60.0	58cm,29m,96w
36.200-6630440.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S	15.05	83	65.0	60cm,30m,133w
36.200-6630470.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S	13.70	78	31.5	76cm,96w

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.200-6630480.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	B(10)	13.23	82	74.5	
36.200-6631710.0		1966	PETAWAWA RIVER	ONT	CAN	45.56	77.33	150	S		**		
36.200-6631720.0		1966	PETAWAWA RIVER	ONT	CAN	45.56	77.33	150	S		**		
36.200-6631730.0		1966	PETAWAWA RIVER	ONT	CAN	45.56	77.33	150	S		**		
36.200-6631740.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S	18.20	**		
36.200-6631750.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S		**		
36.200-6631770.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S		**		
36.200-6631790.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S		**		
36.200-6631800.0		1966	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	150	S		**		
36.200-6730070.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.28	200	B	16.99	78	89.5	
36.200-6730090.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.28	200	N/A	18.60	83	39.0	31cm;15m;50w
36.200-6730100.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.28	200	N/A	20.93	78	12.0	31cm;16m;56w
36.200-6730110.0		1967	P.F.E.S. RACE HORSE RD.	ONT	CAN	45.55	77.27		N/A	26.30	83	95.0	40cm;16m;55w
36.200-6730120.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.28	200	N/A	16.85	78	37.0	31cm;15m;54w
36.200-6730130.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.28	200	N/A	15.30	78	65.5	26cm;14m;49w
36.200-6730170.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.56	77.33	152	N/A	20.54	78	76.0	34cm;14m;53w
36.200-6730190.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.57	77.28	200	N/A	19.25	78	80.0	
36.200-6731760.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.27	170	B	22.41	83	58.0	
36.200-6732010.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.59	75.25	170	N/A		**		
36.200-7001210.0		1970	NEW BAY POND	NFLD	CAN	49.14	55.32		B(15)	17.21	78	73.0	51cm;17-18m;100w
36.200-7011270.0		1970	CAMBRIDGE TWP.	NB	CAN	45.50	66.05	60	B(5)	17.44	78	51.5	
36.200-7031230.0		1970	ATIKOKAN	ONT	CAN	48.38	92.14	400	N/A	11.65	78	67.5	27-30m;135w
36.200-7031250.0		1970	ELDRIDGE TWP.	ONT	CAN	47.00	79.30	310	B	13.74	83	66.0	24-34m;185w
36.200-7031260.0		1970	MACDIARMID	ONT	CAN	49.16	88.09	340	S	18.10	75	93.4	69cm;30m;155w
36.200-7031280.0		1970	PARRY SOUND	ONT	CAN	45.20	79.58	210	B(3)	17.36	83	30.0	24-30m;100-120w
36.200-7031290.0		1970	ANTLER LAKE	ONT	CAN	47.36	83.42	440	B(14)	14.29	78	70.5	24-34m;150-200w
36.200-7031320.0		1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.29	200	S	23.30	83	52.0	
36.200-7031330.0		1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.29	200	N/A	18.38	78	93.5	
36.200-7031340.0		1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.29	200	N/A	23.97	78	97.5	
36.200-7031350.0		1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.29	200	N/A	14.61	78	78.0	
36.200-7031370.0		1970	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.29	200	N/A	19.57	78	91.5	
36.200-7230010.0		1972	C.F.B. PETAWAWA	ONT	CAN	45.53	77.30	200	B(2)	20.65	83	47.0	
36.200-7230020.0		1972	BIGGAR LAKE, PETAWAWA	ONT	CAN	45.53	77.30	206	S		83	90.0	
36.200-7230050.0		1972	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	170	N/A	17.90	83	42.0	
36.200-7230060.0		1972	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.27	180	S	22.91	83	85.0	51cm;21m
36.200-7230070.0		1972	C.F.B. PETAWAWA	ONT	CAN	45.53	77.30	200	S	14.35	83	82.0	
36.200-7230080.0		1972	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	170	N/A	18.57	83	44.0	
36.200-7230090.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	19.14	83	92.0	
36.200-7230100.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	19.44	83	96.0	
36.200-7230110.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(3)	20.99	83	96.0	
36.200-7230120.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	N/A	19.94	83	84.0	
36.200-7230130.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(3)	20.67	83	90.0	
36.200-7230140.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(2)	21.25	83	79.0	
36.200-7230150.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(2)	22.16	83	79.0	
36.200-7230170.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	20.10	83	64.0	
36.200-7230190.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	25.10	83	86.0	
36.200-7230200.0		1972	PET. FOR. EXP. STATION	ONT	CAN	45.55	77.25	170	B(4)	24.60	83	53.0	
36.200-7230220.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	20.40	83	88.0	
36.200-7230230.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(3)	23.37	83	92.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.200-7230240.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	N/A	20.83	83	71.0	
36.200-7230250.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	22.19	83	96.0	
36.200-7230260.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(3)	24.05	83	86.0	
36.200-7230270.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(3)	20.52	83	99.0	
36.200-7230280.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	22.00	83	83.0	56cm;26m
36.200-7230290.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	22.45	83	79.0	
36.200-7230300.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(2)	20.69	83	81.0	
36.200-7230310.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.55	77.25	170	S	27.50	83	98.0	
36.200-7230320.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.55	77.25	170	S	21.60	83	76.0	
36.200-7230340.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.55	77.25	170	S	16.80	83	55.0	
36.200-7230350.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.55	77.25	170	S	15.90	83	65.0	
36.200-7230360.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	S	19.87	74	96.0	
36.200-7230370.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	B(3)	22.10	83	82.0	
36.200-7230380.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.58	77.25	168	S	16.70	83	52.0	46cm;25m
36.200-7230390.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.58	77.25	170	S	15.40	83	92.0	
36.200-7230400.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	206	S	26.20	83	56.0	
36.200-7230410.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30		S	18.10	83	65.0	
36.200-7230420.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30		S	21.20	83	57.0	
36.200-7230430.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30		S	17.10	83	83.0	
36.200-7230440.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30		S	22.20	83	65.0	
36.200-7230450.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30		S	14.30	83	81.0	
36.200-7230470.0		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	200	N/A	17.70	83	29.0	FIRST EXTRACTION
36.200-7230470.5		1972	BIGGAR LAKE, C.F.B.	ONT	CAN	45.53	77.30	206	N/A	19.30	83	82.0	
36.200-7230480.0		1972	PET. FOR. EXP. STATION	ONT	CAN	45.53	77.25	170	S		**		10cm;14m
36.200-7331450.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	180	N/A	16.20	83	97.0	
36.200-7331460.0		1973	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25	160	N/A	19.50	83	82.0	
36.200-7331470.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	N/A	13.70	83	84.0	
36.200-7331480.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	160	N/A	19.80	83	97.0	
36.200-7331490.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	160	S	10.80	83	62.0	
36.200-7331500.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	15.60	83	67.0	56cm;27m
36.200-7331510.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.25	180	S	25.40	83	97.0	
36.200-7331520.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	180	B(2)	20.50	83	64.0	
36.200-7331530.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	16.40	83	56.0	
36.200-7331540.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	13.80	83	100.0	
36.200-7331550.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	180	S	14.90	83	93.0	
36.200-7331560.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.59	77.26	180	B(3)	15.17	83	81.0	
36.200-7331570.0		1973	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25	160	N/A	20.60	83	76.0	
36.200-7331580.0		1973	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	S	16.50	83	95.0	
36.200-7735540.0		1977	TP.22,RGE.11	ONT	CAN	46.54	83.48	430	S	11.40	78	69.0	
36.200-7735560.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	13.40	78	88.0	61cm;18m
36.200-7735570.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	14.10	78	91.0	
36.200-7735580.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	12.85	78	90.0	
36.200-7735590.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	13.28	78	89.5	
36.200-7735600.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	15.22	78	98.5	
36.200-7735610.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	11.34	83	32.0	
36.200-7735620.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	18.21	78	92.0	
36.200-7735630.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	20.04	78	93.5	
36.200-7735650.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	18.45	78	96.0	
36.200-7735660.0		1977	BORDEN TWP.	ONT	CAN	47.53	83.10	400	S	14.88	78	97.5	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.200-7735670.0		1977	PAUDASH TWP.	ONT	CAN	47.16	81.45	400	S	13.37	78	88.0	91cm;18m
36.200-7735680.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	16.88	78	98.5	66cm;24m
36.200-7735690.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	15.99	78	99.5	
36.200-7735700.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	12.62	78	92.0	
36.200-7735710.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	12.09	78	98.0	
36.200-7735720.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	17.31	78	99.0	
36.200-7735730.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	15.88	78	91.0	
36.200-7735740.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	16.81	78	91.0	
36.200-7735750.0		1977	WALDIE TWP.	ONT	CAN	46.08	80.50	210	S	19.95	78	98.0	
36.200-7735780.0		1977	MACAULEY TWP.	ONT	CAN	45.06	79.18	270	R*	16.76	78	98.5	R(10-15)
36.200-7735790.0		1977	MARIA TWP.	ONT	CAN	46.00	78.09	290	B	15.08	78	97.0	80cm;25m
36.200-7931210.0		1979	DEEP RIVER	ONT	CAN	46.06	77.29	115	R(5)	19.71	83	100.0	
36.200-7931220.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	20.83	83	98.0	46-56cm;18-28m
36.200-7931230.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	20.93	83	100.0	
36.200-7931240.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	18.37	83	97.0	
36.200-7931250.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	16.03	83	100.0	
36.200-7931260.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	19.20	83	100.0	
36.200-7931270.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	17.76	83	99.0	
36.200-7931280.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	16.04	83	95.0	
36.200-7931290.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	15.62	83	100.0	
36.200-7931300.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	19.90	83	98.0	
36.200-7931310.0		1979	CFB PETAWAWA	ONT	CAN	45.59	77.23	150	S	20.32	83	100.0	46-56cm;18-28m
36.200-8233380.0		1982	PET. NAT. FOR. INSTIT.	ONT	CAN	45.58	77.29	200	R(4)	11.60	84	77.0	

(36.220) PINUS STROBUS VAR CHIAPENSIS

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.220-7687790.0		1976	TLAPACOYAN VER.		MEX	19.55	97.15	775	N/A	18.00	83	14.0	

(36.300) PINUS SYLVESTRIS [Scotch (Scots) pine]

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
36.300-6731840.0		1967	PET. FOR. EXP. STATION	ONT	CAN	45.58	77.24	160	B	6.40	83	94.0	
36.300-6880220.0		1968	IVANTJARN		SWE	60.40	16.45E	240	B	7.14	**		
36.300-7081640.0		1970	VORONEZH		SUN	52.00	40.00E		B	6.98	71	96.3	
36.300-7081650.0		1970	ORLOVSK OBLAST		SUN	53.00	35.00E		B	6.82	84	85.0	
36.300-7081660.0		1970	KIEV OBLAST		SUN	50.00	30.00E		B	6.80	84	62.0	
36.300-7082000.0		1970	ELVA, ESTONIAN SSR		SUN	58.20	26.00E		B	5.80	83	80.0	
36.300-7181900.0		1971	VORU, ESTONIAN SSR		SUN	57.50	27.00E		B	6.00	83	73.0	
36.300-7181910.0		1971	VALGAMAA, ESTONIAN SSR		SUN	57.45	26.00E		B	6.30	83	83.0	
36.300-7333430.0		1973	LINDSAY	ONT	CAN	44.21	78.44		S	8.00	**		V-900-64
36.300-7333490.0		1973	THESSALON	ONT	CAN	46.15	83.24		S		83	100.0	V-1375
36.300-7333500.0	S 9987	1973	ANGUS	ONT	CAN	44.19	79.53		S		**		V-1374-62
36.300-7333510.0		1973	THESSALON	ONT	CAN	46.15	83.24		S		**		V-1373
36.300-7383420.0		1973	MURAT		FRA	45.06	2.15E		S	8.10	83	100.0	V-1372-62
36.300-7383520.0		1973	THETFORD CHASE FOREST		ENG	52.30	.30E		S		**		V-1370
36.300-7383540.0		1973	MORAYSHIRE		SCO	57.33	3.29		S		**		SECOND EXTRACTION
36.300-7383550.0		1973	MORAYSHIRE		SCO	57.33	3.29		S		**		ST.2955
36.300-7383560.0		1973	MORAYSHIRE		SCO	57.33	3.29		S		84	56.0	ST.2954
36.300-7383570.0		1973	MORAYSHIRE		SCO	57.33	3.29		S		**		ST.2952
36.300-7383580.0		1973	MORAYSHIRE		SCO	57.33	3.29		S		**		ST.2951

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TRTD	% GERM	REMARKS
36.300-7383670.0		1973	MORAYSHIRE		SCO	57.33	3.29		S	7.10	83	84.0	ST.2967
36.300-7486670.0		1974	VILNIAUS, LITHUANIAN SSR		SUN	54.38	25.28E	100	S	6.60	84	57.0	45cm;31m;120w
36.300-7486680.0		1974	JONAVOS, LITHUANIAN SSR		SUN	55.15	24.20E	110	S	6.37	84	78.0	42cm;28m;110w
36.300-7486690.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	5.86	76	97.5	
36.300-7486700.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	5.77	76	96.0	
36.300-7486710.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	5.76	76	97.0	
36.300-7486720.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	7.02	**		
36.300-7486730.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	7.21	**		
36.300-7486740.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	6.15	76	99.5	
36.300-7486750.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	6.57	76	94.5	
36.300-7486760.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	6.12	76	96.0	
36.300-7486770.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	6.46	76	98.5	
36.300-7486780.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	6.37	76	96.0	
36.300-7486790.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	5.43	76	94.0	
36.300-7486800.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	6.15	76	99.0	
36.300-7486810.0		1974	KAUNO, LITHUANIAN SSR		SUN	54.45	24.05E	100	N/A	7.71	76	94.0	
36.300-7487360.0		1974	TURKEY		TUR				N/A	8.20	83	85.0	
36.300-7581490.0		1975	TARTU RES FOR ESTONIAN		SUN	58.22	26.40E	60	S	5.30	77	90.0	
36.300-8181100.0		1981	NOVOSIBIRSKAYA OBLAST		SUN	55.00	80.00E		S	6.82	**	91.0	
36.300-8181110.0		1981	MARIISKAYA OBLAST		SUN	56.00	47.00E		S	6.30	**	96.0	
36.300-8181120.0		1981	MARIISKAYA OBLAST		SUN	56.00	47.00E		S	6.55	**	95.0	
36.300-8181130.0		1981	TATARSKAYA, ASSR		SUN	55.00	50.00E		S	6.72	**	99.0	
36.300-8181140.0		1981	TATARSKAYA, ASSR		SUN	55.00	50.00E		S	7.02	**	95.0	
36.300-8181150.0		1981	VORONEZHSKAYA OBLAST		SUN	50.30	40.00E		S	8.60	**	97.0	
36.300-8181160.0		1981	ORLOVSKAYA OBLAST		SUN	52.30	37.00E		S	7.27	**	89.0	
36.300-8181170.0		1981	KIEVSKAYA OBLAST		SUN	50.30	30.30E		S	7.54	**	95.0	
36.300-8181180.0		1981	KRASNOYARSKY KRAI		SUN	60.00	90.00E		S	5.62	**	97.0	
36.300-8181190.0		1981	KALUZHKAYA OBLAST		SUN	54.00	35.00E		S	7.38	**	95.0	
36.300-8181200.0		1981	SMOLENSKAYA OBLAST		SUN	55.00	32.00E		S	7.33	**	99.0	
36.300-8181280.0		1981	GROENENDAAL 85029 SOR		BEL	50.50	4.21E		N/A	8.29	84	45.5	

(36.350) PINUS SYLVESTRIS var. MONGOLICA

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TRTD	% GERM	REMARKS
36.350-7393100.0	S 9970	1973	HEILONGJIANG PROV.		CHN	46.00	126.00E		S	7.50	83	84.0	
36.350-8284680.0		1982	HEILONGJIANG		CHN	48.00	125.00E		N/A	5.65	83	95.0	VIA DR. MURPHY

(36.370) PINUS SYLVESTRIS var. RIGENSIS

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TRTD	% GERM	REMARKS
36.370-0080001.0		1983	RIGA		SUN	56.53	24.08E		N/A	6.23	84	83.0	VIA VERSEPUY

(36.600) PINUS THUNBERGII (Japanese black pine)

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TRTD	% GERM	REMARKS
36.600-7484340.0		1974	AOMORI PREFECTURE		JPN	40.47	140.20E	60	S	11.70	84	67.0	32cm;16m;51w

(36.700) PINUS WALLICHIANA [Himalayan (Bhutan) pine]

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TRTD	% GERM	REMARKS
36.700-0080002.0		1983	HIMALAYA						N/A	42.12	84	64.5	VIA VERSEPUY

(36.950) PLATYCLADUS ORIENTALIS

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL.	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL. TYPE	1000 SEED WEIGHT	YEAR TRTD	% GERM	REMARKS
36.950-8330018.0		1983	N PELHAM TWP., FONTHILL	ONT	CAN	43.02	79.17	200	S(4)	20.48	83	66.0	EXOTIC;6-10cm;3-4m

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
(37.200) PLATANUS OCCIDENTALIS [American plane (sycamore)]													
37.200-8330442.0		1983	NIAGARA FALLS TWP.	ONT	CAN	43.03	79.08		S(10)	2.86	84	12.0	20-40cm;8-15m;50w
(39.800) PRUNUS SEROTINA (black cherry)													
39.800-8330015.0		1983	FONTHILL	ONT	CAN	43.01	79.18	190	S	97.65	84		FR100%;50cm;15m
39.800-8330027.0		1983	SHERWOOD PK, TORONTO	ONT	CAN	43.43	79.23	150	S	127.44	84		FR100%;30cm;12m
(40.200) PSEUDOTSUGA MENZIESII (douglas-fir)													
40.200-6470290.0		1964	QUESNEL	BC	CAN	53.14	122.30	820	B	9.50	75	85.6	
40.200-6671200.0		1966	ELK VALLEY VANCOUVER IS.	BC	CAN	49.45	125.50	910	B	9.57	83	48.0	
40.200-6772340.0		1967	NELSON	BC	CAN	49.30	117.16	820	B	9.36	83	65.0	
40.200-6772350.0		1967	FRANKLIN RIVER	BC	CAN	49.06	124.46	150	B	8.97	83	73.0	
40.200-6782360.0		1967	PACKWOOD	WASH	USA	46.34	121.40	655	B	8.58	83	23.0	
40.200-6871090.0		1968	PINETAN	BC	CAN	50.45	119.55	840	B	10.89	71	89.0	
40.200-6871100.0		1968	SHUSWAP LAKE	BC	CAN	50.55	119.25	1070	B	10.74	71	88.5	
40.200-6971750.0		1969	HORSEFLY	BC	CAN	52.18	121.19	820	B(15)	8.33	83	62.0	
40.200-6981760.0		1969	EUGENE	OR	USA	44.01	123.23	210	S	10.97	83	64.0	30cm;18m
40.200-6981770.0		1969	HAPPY CAMP	CAL	USA	41.57	123.30	975	S	12.62	83	58.0	8cm;37m
40.200-6981780.0		1969	COALDALE	COLO	USA	38.20	105.50	2300	B(50)	14.06	83	76.0	
40.200-6981790.0		1969	CLEAR CREEK	NM	USA	36.03	106.50	2870	B*	12.41	83	80.0	B(10-100)
40.200-7072010.0		1970	MALAHAT SUMMIT-VAN IS	BC	CAN	48.46	123.35	625	B	7.93	84	55.0	
40.200-7172040.0		1971	ADAMS LAKE	BC	CAN	51.26	119.28	530	B	8.94	83	67.0	
40.200-7175610.0		1971	HAT CREEK	BC	CAN	50.51	121.30	1000	B	12.01	75	52.7	
40.200-7373390.0		1973	JOHNSON LAKE	BC	CAN	51.10	121.30	1070	B	11.42	83	27.0	
40.200-7373400.0		1973	GOLDEN	BC	CAN	51.26	117.03	880	B	9.28	83	26.0	
40.200-7664150.0		1976	ROCKY/CLEARWATER FOREST	ALTA	CAN	52.10	116.24	1600	S	6.20	**		SECOND KILN
40.200-7664150.1		1976	ROCKY/CLEARWATER FOREST	ALTA	CAN	52.10	116.24	1600	S	6.50	**		FIRST KILN
40.200-7664160.1		1976	ROCKY/CLEARWATER FOREST	ALTA	CAN	52.10	116.24	1600	S	5.25	**		FIRST KILN
40.200-7971820.0		1979	THADDEUS LAKE	BC	CAN	51.55	123.40	1130	B(10)	10.63	83	91.0	6-18m;50-200w
40.200-7973970.0		1979	TIMOTHY LAKE	BC	CAN	51.52	121.20	1008	B		**		
40.200-8370637.0		1983	THIRD LAKE	BC	CAN	49.05	124.19	250	B(10)	10.39	84	97.0	9-18m;25-35w
40.200-8370638.0		1983	CASSIDY	BC	CAN	49.02	123.52	45	B(10)	9.46	84	91.0	7-15m;35-50w
(40.400) PSEUDOTSUGA SINENSIS (Chinese douglas-fir)													
40.400-8283360.0		1982	KUI-CHAN PROVINCE		CHN				N/A		84	22.0	
40.400-8283370.0		1982	SUANG-BIE-HSIEN HUNAN		CHN	26.00	112.00E	1400	N/A	27.05	84	.1	
(40.500) PTELEA TRIFOLIATA (hop-tree)													
40.500-8330640.0		1983	FONTHILL	ONT	CAN	43.02	79.17	190	B(3)	36.33	84	15.5	HEAVY CROP
(43.800) ROBINIA PSEUDOACACIA (black locust)													
43.800-8230250.0		1982	TWP OF LINCOLN	ONT	CAN	43.10	79.29	172	S	18.70	83	83.0	21cm;11m;34w

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
43.800-8330025.0		1983	CHORLEY PK, TORONTO	ONT	CAN	43.41	79.23	122	B(3)	23.02	84	55.0	8-15cm;4-13m
(44.870) SEQUOIADENDRON GIGANTEUM (giant sequoia)													
44.870-8181310.0		1981	CALIFORNIA	CAL	USA				N/A	6.09	84	26.5	
(46.200) THUJA OCCIDENTALIS (eastern white cedar)													
46.200-5830370.0	S 71-58	1958	P.F.F.S. RESID. AREA	ONT	CAN	46.00	77.27		N/A		**		
46.200-6030510.0	S 101-60	1960	PET. FOR. EXP. STA.	ONT	CAN	45.55	77.28		N/A	1.56	84	48.0	RACE HORSE RAPIDS
46.200-6730570.0		1967	LAKE DORE	ONT	CAN	45.37	77.07	175	B	1.15	83	12.0	
46.200-6731850.0		1967	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.25	150	B	1.08	**		
46.200-7034350.0		1970	CRF ARBORETUM, OTTAWA	ONT	CAN	45.24	75.33	78	S		**		CRF,S0166;15cm;8m
46.200-8130230.0		1981	LAKE DORE	ONT	CAN	45.37	77.07	175	B(5)	.87	83	13.0	
46.200-8233290.0	S 23001	1982	GOLDEN LAKE RENFREW CO.	ONT	CAN	45.35	77.14		B	1.16	84	73.0	
(46.400) THUJA PLICATA (western red cedar)													
46.400-6581170.0	S 6093	1965	PRIEST RIVER, N. IDAHO	ID	USA	48.20	116.50	1660	N/A		**		
46.400-7272310.0		1972	COWICHAN LAKE,VAN. IS.	BC	CAN	48.50	124.00	75	R	1.22	83	19.0	
46.400-7272330.0		1972	SC-400, VANCOUVER IS.	BC	CAN	50.11	125.48	430	R	1.15	83	39.0	
46.400-7473000.0		1974	MANNING PROV. PARK	BC	CAN	49.10	120.55	1000	R(5)		**		15-25cm;15-19m
46.400-7473130.0		1974	SHUSWAP LAKE	BC	CAN	50.53	119.22	400	R	1.06	83	50.0	
46.400-8370633.0		1983	LANTZVILLE	BC	CAN	49.14	124.00	90	R(6)	.88	84	41.0	25-30m;60-90y
46.400-8370634.0		1983	YELLOW POINT	BC	CAN	49.03	123.48	61	D(15)	.90	84	40.5	15-35m;35-80y
(47.100) TILIA AMERICANA (basswood; American linden)													
47.100-6430310.0		1964	LAKE DORE	ONT	CAN	45.38	77.04		B		**		
47.100-6430380.0	S 228-64	1964	LAKE DORE, SOUTH SIDE	ONT	CAN	45.38	77.04		N/A		**		
47.100-7031[illegible]0.0		1970	CENTRE LAKE	ONT	CAN	45.57	77.30		S		**		
47.100-7033180.0		1970	PET. FOR. EXP. STATION	ONT	CAN	46.00	77.26	150	N/A		**		
47.100-7034340.0		1970	CRYSTAL BAY, OTTAWA	ONT	CAN	45.22	75.52	65	S	123.35	**		CRF,S0158;43cm;13m
47.100-8330010.0		1983	NIAGARA-ON-THE-LAKE	ONT	CAN	43.15	79.04		N/A		**		15cm;4m
(47.300) TILIA CORDATA (small-leaved lime)													
47.300-8232090.0		1982	OTTAWA	ONT	CAN	45.25	75.42		N/A		**		
(47.450) TILIA PLATYPHYLLOS (large-leaved lime)													
47.450-8330009.0		1983	FONTHILL OMNR OFFICE	ONT	CAN	43.02	79.17	190	S		**		35cm;13m;45y
47.450-8330068.0		1983	MT. PLEASANT CEMETERY	ONT	CAN	43.42	79.23	150	S		**		40cm;13m
47.450-8330069.0		1983	MT. PLEASANT CEMETERY	ONT	CAN	43.42	79.23	150	S		**		65cm;12m
(48.100) TSUGA CANADENSIS (eastern hemlock)													
48.100-6930310.0		1969	KIOSK	ONT	CAN	46.02	78.44	370	S	2.96	83	7.0	
48.100-6930330.0		1969	KIOSK	ONT	CAN	46.02	78.44	370	S	2.11	83	7.0	

SEED LIST

SEED BANK NUMBER	NURSERY NUMBER	YEAR COLL	PROVENANCE	PROV	CTRY	LAT	LONG	ELEV (m)	COLL TYPE	1000 SEED WEIGHT	YEAR TSTD	% GERM	REMARKS
48.100-6930380.0		1969	KIOSK	ONT	CAN	46.02	78.44	370	S	3.29	83	68.0	
48.100-6930410.0		1969	KIOSK	ONT	CAN	46.02	78.44	370	S	2.96	83	15.0	
48.100-6930560.0		1969	CORMAC	ONT	CAN	45.28	77.17	240	S	3.67	83	8.0	
48.100-8030660.0		1980	CLYDE TWP.	ONT	CAN	45.22	78.16	460	B(10)	2.76	83	45.0	
(48.252) TSUGA CHINENSIS VAR TCHEKIANGENSIS													
48.252-8283300.0		1982	HUANG MTAN-LUI PROV.		CHN				N/A	2.23	84	6.0	
(48.300) TSUGA DIVERSIFOLIA (northern Japanese hemlock)													
48.300-7483820.0		1974	GUNMA PREFECTURE		JPN	36.30	138.22E	1800	S	2.87	75	19.5	22cm;18m;100y
(48.350) TSUGA FORESTII													
48.350-8283310.0		1982	LI R., SU-TSUAN PROV.		CHN				N/A	4.25	84	20.0	
(48.400) TSUGA HETEROPHYLLA (western hemlock)													
48.400-7272030.0		1972	QUEEN CHARLOTTE ISLANDS	BC	CAN	53.35	132.20	75	B	1.50	83	20.0	
48.400-7272260.0		1972	SOOKE, VANCOUVER IS.	BC	CAN	48.22	123.44	4	B	2.32	83	20.0	
48.400-7477330.0		1974	PARKSVILLE	BC	CAN	49.10	124.30	75	B	2.22	76	86.3	
(49.100) ULMUS AMERICANA [white (American) elm]													
49.100-7830520.0		1978	PEMBROKE	ONT	CAN	45.48	77.08	150	S		84	38.0	

APPENDICES
ANNEXES

A. Key for Country Codes
   Code des pays

B. Key for province codes
   Code des provinces

APPENDIX A
ANNEXE A

Key for country codes
Code des pays[1]

Country Code Code des pays	Meaning Signification
AUT	AUSTRIA/AUTRICHE
BEL	BELGIUM/BELGIQUE
CAN	CANADA
CHN	CHINA/CHINE
CSK	CZECHOSLOVAKIA/TCHÉCOSLOVAQUIE
CUB	CUBA
DEU	WEST GERMANY/RÉPUBLIQUE FÉDÉRALE D'ALLEMAGNE
DNK	DENMARK/DANEMARK
ENG	ENGLAND/ANGLETERRE
FIN	FINLAND/FINLANDE
FRA	FRANCE
JPN	JAPAN/JAPON
MEX	MEXICO/MEXIQUE
PAK	PAKISTAN
POL	POLAND/POLOGNE
ROM	ROMANIA/ROUMANIE
SCO	SCOTLAND/ÉCOSSE
SUN	USSR/URSS
SWE	SWEDEN/SUÈDE
TUR	TURKEY/TURQUIE
USA	UNITED STATES/ÉTAS-UNIS

[1]from International Organization for Standardization (1981).

APPENDIX B
ANNEXE B

Key for province and state codes
Code des provinces et des Etats Américains

Province code Code des provinces	Meaning Signification
ALAS	ALASKA
ALTA	ALBERTA
BC	BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE
CAL	CALIFORNIA
COLO	COLORADO
GA	GEORGIA
ID	IDAHO
MAN	MANITOBA
ME	MAINE
MICH	MICHIGAN
MINN	MINNESOTA
MONT	MONTANA
NB	NEW BRUNSWICK/NOUVEAU-BRUNSWICK
NFLD	NEWFOUNDLAND/TERRE-NEUVE
NM	NEW MEXICO
NS	NOVA SCOTIA/NOUVELLE-ÉCOSSE
NWT	NORTHWEST TERRITORIES/TERRITOIRES DU NORD-OUEST
NY	NEW YORK
ONT	ONTARIO
OR	OREGON
PEI	PRINCE EDWARD ISLAND/ÎLE-DU-PRINCE-ÉDOUARD
QUE	QUÉBEC
SASK	SASKATCHEWAN
WASH	WASHINGTON
WYO	WYOMING
YT	YUKON TERRITORY/TERRITOIRE DU YUKON

PETAWAWA NATIONAL FORESTRY INSTITUTE

The Petawawa National Forestry Institute (PNFI) was formed on April 1, 1979, as the result of an amalgamation of the Petawawa Forest Experiment Station with the Ottawa-based Forest Management and Forest Fire Research Institutes. The Forestry Statistics and Systems Branch was established at PNFI in 1980.

In common with the rest of the Canadian Forestry Service, the Petawawa National Forestry Institute has as its objective the promotion of better management and wiser use of Canada's forest resource to the economic and social benefit of all Canadians. Because it is a national institute, particular emphasis is placed on problems that transcend regional boundaries or that require special expertise and expensive equipment that cannot be duplicated in CFS regional establishments. Such research is often performed in close cooperation with staff of the regional centres or provincial forest services.

Research at the Institute is in two main areas:

FIRE RESEARCH AND REMOTE SENSING. Every year in Canada large areas of productive forest are destroyed by fire. Research concentrates on studies of forest fire behaviour, the development of new methods of fire control, the evaluation of fire-fighting equipment and retardants, and the development of computerized fire management systems that are rapidly finding applications with fire-fighting agencies across the country. The environmental and economic impact of forest fires and the use of fire as a silvicultural tool for intensive forest management are also studied.

In remote sensing, investigations are made into the application of modern satellite and airborne remote sensing systems to forestry problems. In this respect, the ARIES digital image analysis sytem is proving invaluable.

INTENSIVE FOREST MANAGEMENT. As Canada moves into more intensive management of its forest to meet expected increases in demand for this vital resource, the role of this program will become increasingly important. An extensive reforestation program will require a steady supply of high-quality seed of the desired species. Improved growing stock, obtained through tree breeding and forest genetics research, is highly desirable. Increased emphasis is being placed on using the entire above-ground portion of the tree (biomass), but the effect on the environment of this and other forms of intensive management has to be carefully monitored. Biotechnological methods of improving yield while maintaining site productivity are being investigated.

In support of its research programs, the Institute has at its disposal a 98 km^2 area of forest in the western part of the Petawawa military reserve. Records of experiments and sample plots have been maintained since the 1920s. The forest also serves as a field laboratory for students from local schools, and a visitor centre is operated during the summer months.

The operations of PNFI also includes THE FORESTRY STATISTICS AND SYSTEMS BRANCH (FSSB) which is responsible for the acquisition and publication of national information on the forests of Canada. Through the Canadian Forest Inventory Committee, which is comprised of provincial and federal forestry officials, the FSSB works in close cooperation with provincial forest agencies to improve and standardize the information available on Canada's forest resources.

Through the FORSTATS program, which involves all regional establishments of the Canadian Forestry Service, the FSSB coordinates the acquisition and publication within the CFS of national statistics on the forests of Canada.

Every five years, the FSSB publishes Canada's Forest Inventory; the official report on the location, extent, species, and condition of the forest resource. In addition, the FSSB is working closely with the provinces to expand the information available on changes to the forest from fire, harvesting, insects, and disease and from forest management activities. This information is essential to the development of sound policies for the improved management of this important and renewable natural resource.